

Repair Manual
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6-Speed Dual Clutch Transmission 0D9

Edition 03.2023



List of Workshop Manual Repair Groups

Repair Group

00 - General, Technical Data

30 - Clutch

34 - Controls, Housing

35 - Gears, Shafts

39 - Final Drive, Differential



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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General, Technical Data -00

Safety Precautions

(Edition 03.2023)

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- ⇒ S1.1 afety Precautions", page 1
- ⇒ P1.2 recautions when Working on Vehicles with Start/Stop System", page 1
- ⇒ P1.3 recautions during Road Test with Testing Equipment",
- ⇒ P1.4 recautions when Tow Starting and Towing", page 2

1.1 **General Safety Precautions**

Risk of accident due to vehicle Profittied by copyright. Copying for private or commercial purposes, in part or in whole, is not purposed by AUDI AG. AUDI AG does not guarantee or accept any liability When performing work on the vehicle, it should generally be secured to prevent rolling.

- Automatic transmission/dual clutch transmission: select the "P" selector lever position.
- Manual transmission: select 1st gear.
- Engage the parking brake.

Risk of destroying the electronic components.

Risk of destroying electronic components when disconnecting the battery.

- Always turn off the ignition before disconnecting the battery.
- Only connect and disconnect test equipment when the ignition is off.
- Disconnect the battery. Refer to ⇒ Electrical Equipment: Rep. Gr. 27; Battery; Battery, Disconnecting and Connecting.

Safety Precautions when Working on 1.2 Vehicles with Start/Stop System

Pay attention to the following when working on vehicles with a Stop/Start system:

There is a risk of injury if the internal combustion engine starts unexpectedly.

The engine can start unexpectedly when the Start/Stop System is activated on the vehicle. Risk of pinching and pulling parts of the body.

- Turn off the ignition and all electric equipment.
- Place the vehicle key and other start authorization systems (such as smartphones) outside of the vehicle interior.



1.3 Safety Precautions during Road Test with Testing Equipment

There is a risk of injury due to unsecured testing equipment.

If the front passenger airbag unit deploys during a collision, testing equipment that is not secured correctly will be throw around the passenger compartment and endanger vehicle occupants.

- Secure testing equipment on the rear seat.
- Have a second person operate testing equipment on the rear seat.
- In vehicles with two seats, the front passenger airbag should be deactivated and the front passenger seat should be moved as far back as possible.



Risk of damaging the transmission.

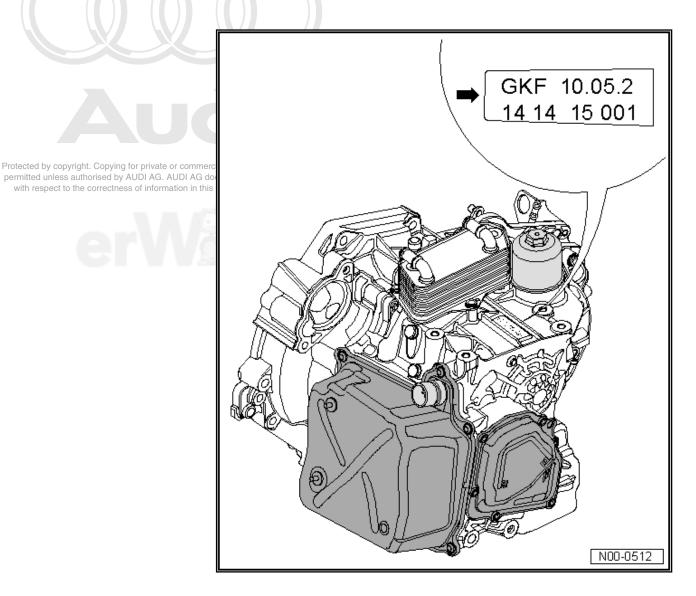
It is possible to damage the transmission by towing the vehicle improperly.

- Place the selector lever in the "N" position to tow the vehicle.
- When towing, do not drive faster than 50 km/h (31.1 mph) and do not drive over 50 km (31.1 miles).

2 Identification

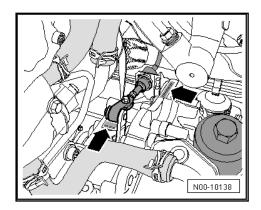
- ⇒ I2.1 dentification", page 3
- ⇒ B2.2 ox Identification", page 4

2.1 Transmission Identification



The following specifications can be found on top of the transmission (example):

- ♦ GKF = Transmission code
- ◆ 10.05.2 = Production date May 10, 2002
- 14 14 15 = Manufacturer identification
- 001 = serial number
- Depending on the version, the code is also on top of the transmission near the selector lever cable -arrows-.



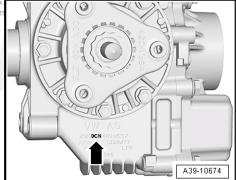
- The transmission codes are also on the vehicle data labels.
- Vehicle data label locations:
- Audi A3. Refer to ⇒ Maintenance; Booklet 821.
- Audi TT. Refer to ⇒ Maintenance; Booklet 826.
- Audi Q2. Refer to ⇒ Maintenance; Booklet 840.
- Audi Q3. Refer to ⇒ Maintenance; Booklet 502.
- Audi A1. Refer to ⇒ Maintenance; Booklet 503.

2.2 **Bevel Box Identification**

The bevel box "0CN" -arrow- comes from the "Linamar" manufacturer. The output flange is secured with a twelve-point nut.

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3 Repair Information

- ⇒ I3.1 nformation", page 5
- ⇒ C3.2 ontrol Module Safety Functions", page 6
- ⇒ f3.3 or Clean Working Conditions", page 6
- ⇒ R3.4 epair Information", page 7
- ⇒ C3.5 orrosion", page 8

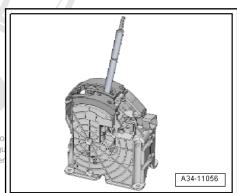
General Information 3.1

Transmission

- The flywheel transfers the engine torque to the dual clutch. The flywheel and the dual clutch are connected to each other via splines. Together they take over the function of the dual mass flywheel.
- The transmission is built like a 6-speed manual transmission. The alternating hydraulic actuation of the two multiplate dry clutches permits operation similar to that of an automatic transmission. This means that the gears are engaged automatically or manually with the Tiptronic mode. There is no clutch pedal.
- Both clutches are open when the ignition is switched off. 1st gear on sub-transmission 1 and reverse gear on sub-transmission 2 are engaged.

Shift Mechanism

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In contrast to an automatic transmission, the selector lever position is no longer transmitted mechanically to the transmission via the selector lever cable and the multifunction transmission range switch (drive position sensor). The selector lever positions or gearshifts are transmitted via a separate control module in the selector mechanism to the transmission control module via the CAN bus. Shifting occurs without a cable. The selector lever cable mechanically brings the parking lock into the selector lever position "P".

Transmission Fluid and Gear Oil

The 6-speed dual clutch transmission and the front final drive have shared transmission fluid filling.

The bevel box has a separate gear oil fill.

Shift Point Changes on Inclines and Declines

Additional gear change maps automatically select the gear changes for gradients depending on the accelerator pedal position and vehicle speed.

- The gear change map for extreme uphill stretches is adapted to engine output
- The gear change map for extreme downhill stretches is adapted to the engine braking effect.
- Direct gear selection via the Tiptronic function also permits utilization of the engine braking effect with a specific gear engaged, for example, on a downhill gradient when towing a trailer.

Transmission Control Module Safety 3.2 **Functions**

If components or sensors fail, the Dual-Clutch Transmission Mechatronic -J743- activates the corresponding emergency mode replacement program. The transmission can still be operated without causing damage, but shift function and quality may be affected.

When malfunctions are detected by the transmission, there are four possible situations:

- A malfunction is saved and a replacement program is activated at the same time. The transmission range indicator in the instrument cluster does not change and indicates the engaged selector lever position. Driving farther is possible with restrictions, the situation is not critical for either driving safety or the transmission. The driver will only notice the malfunction, if it is noticed at all, in terms of handling problems and should then consult an Audi service dealer immediately.
- Individual selector lever positions blink in the transmission range indicator in the instrument cluster. The driver is shown that a desired gear selection is currently not possible. Example: if the vehicle rolls backwards in the "R" selector lever position and the "D" selector lever position is engaged during this, the transmission range indicator "D" will blink. To prevent damage to the transmission, the Dual-Clutch Transmission Mechatronic -J743- prevents 1st gear from being engaged as long as the vehicle is rolling in reverse. 1st gear is engaged only when the vehicle comes to a standstill.
- The transmission range indicator lights up completely and blinks; the engaged selector lever position is highlighted. The driver is notified of a temporary serious malfunction. Example: the transmission was overloaded or the maximum temperature in the transmission was exceeded, for example due to towing a trailer with a too high of a load. Driving farther is possible once the transmission has cooled, but high load must be avoided.
- The transmission range indicator blinks, the selector lever position engaged is not recognized. The driver is notified of a permanent serious malfunction. Because individual gears can no longer be engaged, this situation is critical for driving safety and for the transmission. This type of display instructs this driver to go to an Audi service dealer.

3.3 Guidelines for Clean Working Conditions

- Thoroughly clean connection points and the private of commercial purposes, in part or in whole, is not private or commercial purposes, in part or in whole, is not permitted unless authorised by ALL AG. AUDI AG does not guarantee or accept any liability areas with engine or brake cleaner before loosening and information in this document. Copyright by AUDI AG. allow the cleaned connection points to dry completely.
- Clean the transmission and transmission components using Cleaning Solution -D 009 401 04-.



- Use lint-free cloths for cleaning, for example, the "WYPALL X70/WORKHORSE" cloth made by Kimberly-Clark Profes-
- Seal all open lines and connections immediately with clean plugs or caps from the Engine Bung Set -VAS 6122-.
- Place the removed parts on a clean surface and cover them. Use foil and paper. Use lint-free cloths.
- Carefully cover or seal opened components if the repair will not be done immediately.
- Only install clean parts: remove the replacement parts from wittheir packaging just before installing them yright by AUDI AG.
- Protect the disconnected connectors from dirt and moisture and only connect when they are dry.

3.4 General Repair Information

- The highest level of care and cleanliness along with tools that function properly are required to ensure a proper and successful transmission repair. Of course the general safety precautions also apply when carrying out repair work.
- Some general repair information that applies to several procedures throughout this manual is summarized here. They apply to this repair manual.

Guided Fault Finding, OBD and Test Instruments

Before starting any repairs on the transmission, determine the exact cause of the damage if possible using the \Rightarrow Vehicle diagnostic tester in Guided Fault Finding, OBD or Test Instruments

Special Tools

For a complete list of special tools used in the repair manual, refer to ⇒ Workshop Equipment and Special Tools.

Oil, Environmental and Disposal Regulations

- Handle ATF, gear oil and other fluids with care.
- Dispose of drained fluid properly.
- Follow the legal, environmental, and disposal regulations.
- Follow the instructions listed on the fluid packaging.

Transmission

- Do not run the engine or tow the vehicle when the transmission fluid pan is removed or when there is no transmission
- Thoroughly clean the connection points and the surrounding area before loosening.
- During installation, make sure the alignment sleeves are fitted correctly.

O-Rings, Gaskets and Seals

- O-rings, gaskets and seals must always be replaced.
- Seals are also called shaft seals.
- After removing the seals, examine the contact surface on the housing or shaft for burrs resulting from removal or for other signs of damage.
- Thoroughly clean the housing separating surfaces before assembling.

- Always replace paper gaskets, completely remove an old seal and thoroughly clean the sealing surfaces.
- Coat the seals with transmission fluid along the outer circumference and along the sealing lip to install.
- Coat the O-rings with transmission fluid or Vaseline before inserting to prevent them from being crushed during assembly.
- Do not use any other lubricants in the transmission fluid area. Otherwise there is a danger of the hydraulic transmission control malfunctioning.
- The open side on the shaft seals faces the fluid to be sealed
- Press in new shaft seal, so that the sealing lip does not run on the same point as the sealing lip of the old shaft seal (use offset tolerance).
- Follow the guidelines for clean working conditions. Refer to ⇒ f3.3 or Clean Working Conditions", page 6.

Circlips

- Do not stretch the circlips.
- Replace damaged or stretched circlips.
- The circlips must rest at the bottom of the groove.

Bolts and Nuts

- Loosen the bolts opposite the tightening sequence.
- Bolts or nuts for securing covers and housings should be loosened and tightened diagonally in stages if no tightening sequence is specified.
- Replace the self-locking nuts.
- Use a wire brush to clean the threads of the bolts that were installed with locking fluid. Install the bolts with Locking Fluid (refer to the ⇒ Electronic Parts Catalog (ETKA)).
- The tightening specifications given apply to unoiled bolts and ommercial purposes, in part or in whole, is not nuts. permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

3.5 Contact Corrosion

Contact corrosion can occur if incorrect fasteners (bolts, nuts, washers, etc.) are used.

For this reason, only fasteners with a special surface coating may be installed.

Furthermore, only rubber/plastic parts and adhesive made of electrically non-conductive materials are used.

If there are doubts about whether parts can be used or not, use new parts. Refer to the ⇒ Electronic Parts Catalog (ETKA).

Note:

- Only original replacement parts are recommended. They are checked and are compatible with aluminum.
- The use of Audi accessories is recommended.
- Contact corrosion damage is not covered under warranty.



Technical Data 4

⇒ 4.1 , page 9

4.1 Capacities

Capacities	Transmission Fluid
Refill	6.9 liters
Change	about 5.2 liters
Change Interval	Refer to the ⇒ Maintenance Tables.
Grease	Transmission fluid for dual clutch transmission 0D9. Refer to the ⇒ Electronic Parts Catalog (ETKA).

- Check the transmission fluid level. Refer to ⇒ F9.2 luid Level, Checking", page 128
- Transmission Fluid, Draining and Filling. Refer to ≥ F9.3 luid, Draining and Filling", page 132

Capacities	Bevel Box
Refill	0.9 liters
Change	Permanent fill, no change
Grease	Gear oil. Refer to the ⇒ Electronic Parts Catalog (ETKA).

- Gear Oil, Checking Level. Refer to ⇒ 05.2 il, Checking Lev-Protected by Copyright. 73 pying for private or commercial purposes, in part or in whole, is not
- ited unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Gear, Oil, Draining and Filling, Refer to ≥ 05.3.11. Draining and Filling", page 175
- Only the transmission fluid for the 6-speed dual clutch transmission 0D9 that is available as a replacement part may be used. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- ♦ Only the gear oil for the bevel box that is available as a replacement part may be used. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Using other fluids can cause malfunctions or transmission failure.
- Underfilling or overfilling both fluid systems will impair the function of the transmission.

Clutch 30 –

Clutch

- ⇒ -1.1 Dual Clutch", page 10
- ⇒ C1.2 lutch, Removing", page 10
- ⇒ C1.3 lutch, Installing", page 14

1.1 Overview - Dual Clutch

Replacement part package

1 - Dual Clutch

- With circlip
- Do not disassemble the dual clutch.
- Removing. Refer to <u>⇒</u> C1.2 luch, Removing", page 10
- □ Installing. Refer to ⇒ C1.3 lutch, Installing", page 14

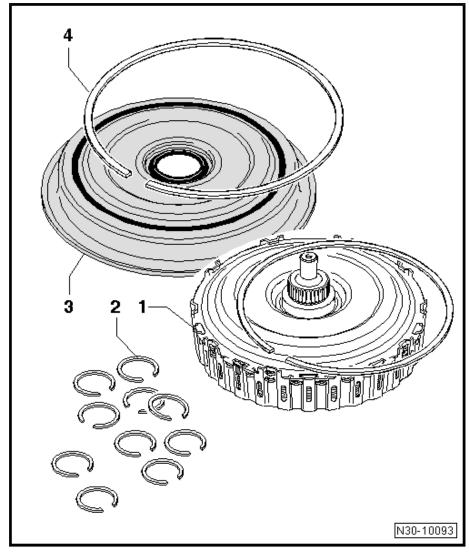
2 - Circlips

- ☐ Quantity: 10, different thicknesses for adjusting the clutch
- Determine the thickness when installing the clutch. Refer to ⇒ page 18

3 - Clutch End Cover

4 - Circlip

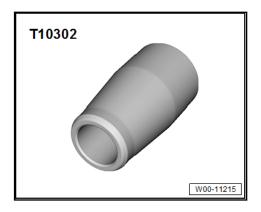
☐ For clutch end cover



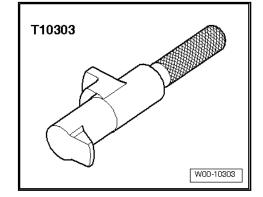
1.2 **Dual Clutch, Removing**

Special tools and workshop equipment required

Clutch Cover Plate Guide Sleeve -T10302- for clutch end cover without bushing

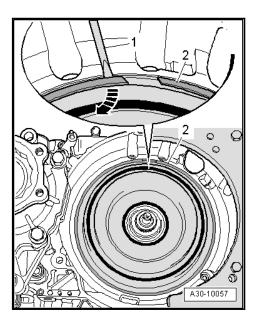


◆ Clutch Retaining Bar -T10303-



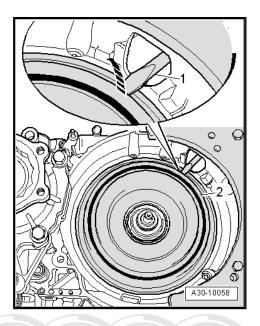
Clean the Clutch Cover Plate Guide Sleeve -T10302- before using, and do not use any scratched sleeves.

Procedure
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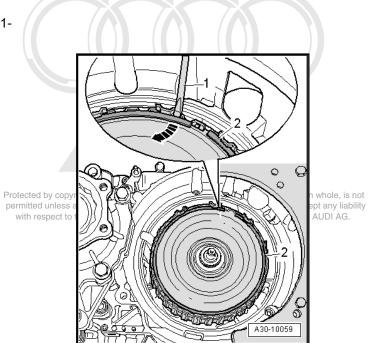


- Transmission secured vertically to the engine/transmission holder. Refer to <u>⇒ o4 n Engine and Transmission Holder</u>", <u>page 92</u>.
- Drain the transmission fluid. Refer to ⇒ F9.3 luid, Draining and Filling", page 132.
- Replace the transmission fluid filter. Refer to ⇒ F8.3 luid Filter, Removing and Installing", page 124
- Pry out the shaft seal -2- for the clutch end cover using a screwdriver -1- -arrow- and remove it.

Pry the clutch end cover -2- out through the installation opening for the starter using a screwdriver -1- or an extractor lever -arrow- and remove it.



- The clutch end cover must be replaced.
- Pry out the drive plate circlip -2- using a screwdriver -1--arrow-.



Remove the drive plate -arrows-.

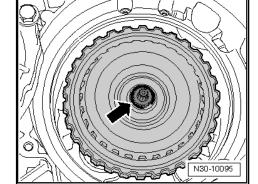


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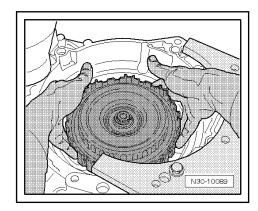
Pry out the circlip -arrow- using a screwdriver or needle nose pliers.



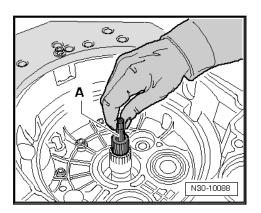
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- The circlip must be replaced.
- Carefully remove the dual clutch from the transmission.



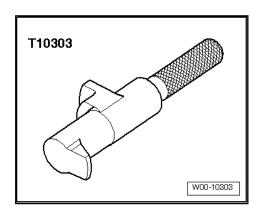
- Carefully remove the dual clutch. Make sure that no other parts of the clutch fall out; for this reason, never turn over the clutch!
- When the dual clutch is removed, check if the clutch housing was damaged during removal.
- Remove the pump shaft -A- and move it to the side.



1.3 **Dual Clutch, Installing**

Special tools and workshop equipment required

◆ Clutch Retaining Bar -T10303-

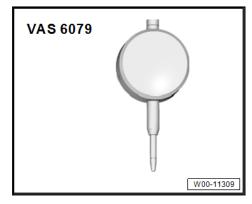


Dial Indicator - 0-10mm -VAS 6079-



Dial Indicator Holder -VW387-

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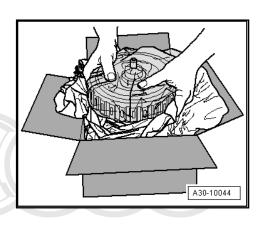
Brief Description

Adjust the clutch axial play when installing.

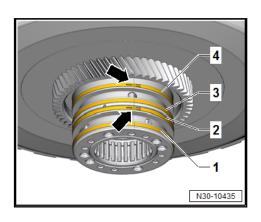


- Secure the transmission to the assembly stand so that it is vertical when removing and installing the clutch. This is the only position in which the clutch axial play can later be adjusted without malfunctions.
- The large clutch plate carrier is inserted in all clutch discs in the clutch. The large clutch plate carrier must not slide out of the lowest plate.
- Oil pump shaft is removed.
- Do not install any wavy circlips
- The drive plate (upper section of the dual clutch) of a new clutch is not secured with the circlip, it only sits "taut" in the clutch.
- The drive plate must remain engaged between the teeth of the outer clutch plate carrier.
- If the drive plate is loosened, the plates in the dual clutch can slip out of place and it cannot be adjusted correctly during installation under the circumstances.

Installing

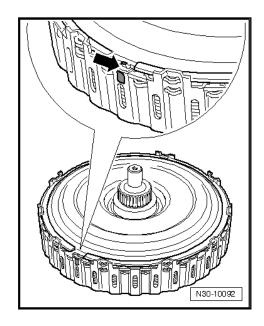


- Use special caution when removing the dual clutch from the packaging.
- Do not remove or lift the clutch pack, not even a small amount. The clutch plates can rotate themselves.
- If the drive plate comes out of the outer clutch plate carrier teeth, the plates can slip. The dual clutch can then no longer rotected by copyright. Copying for private or commercial purposes, in part or in whole, is not be adjusted correctly. permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability To ensure that the multiplate clutch plates do not slip, press
 the drive plate into the current state of the correctness of information in this document. Copyright by AUDI AG.
- the drive plate into the outer clutch plate carrier with both thumbs during all of the following steps.
- Check on the bottom of the dual clutch if the four hub seals are seated correctly and engage them in one another if necessary.

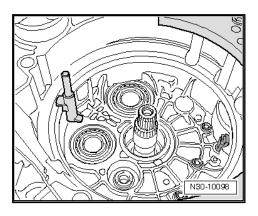


Installation position: the ends of the rings are offset to each other.

Installation position of the drive plate



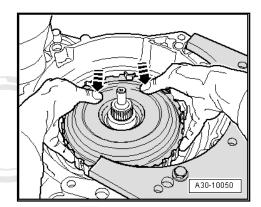
- The protruding tab -arrow- must be positioned between the color-marked teeth of the outer clutch plate carrier.
- If no mark is present, the tab to the outer clutch plate carrier is marked all around with color.
- When installing, the drive plate tab must be placed back on this marked location.
- Position the Clutch Retaining Bar -T10303- on the clutch end cover seat as shown.



Insert the dual clutch in clutch bell housing by turning and lifting and pressing drive plate into outer clutch pack carrier with both thumbs -arrows-.

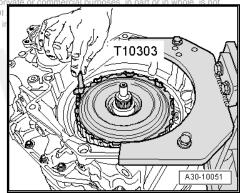


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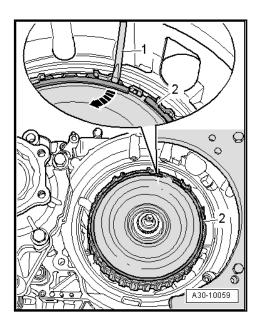


- Do not let the dual clutch fall into the inner clutch plate carrier.
- Have a second technician hold the Clutch Retaining Bar -T10303- as shown until the clutch end cover is installed.

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- To prevent the Clutch Retaining Bar -T10303- from rotating in place, do not turn the dual clutch any farther.
- Pry out the circlip -2- using a screwdriver -1- -arrow-.



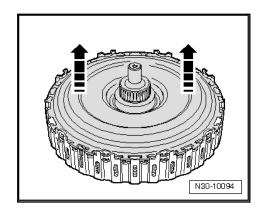
Remove the drive plate -arrows-. To do so, carefully pry the drive plate out of the outer clutch plate carrier teeth using a screwdriver if necessary.

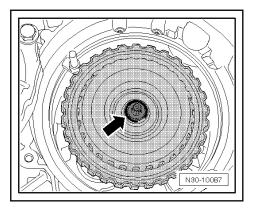




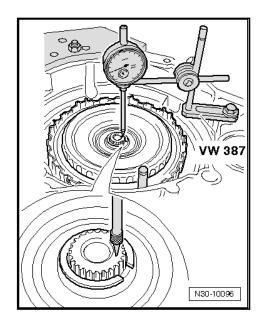
- If the inner clutch plate carrier is removed or raised, the plates can slip. The dual clutch can then no longer be adjusted correctly.
- Move the drive plate to the side.

Dual Clutch, Adjusting (Determining Circlip Thickness)





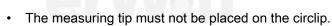
- Find the circlips with a 2 mm thickness in the replacement part package.
- For the initial measurement, temporarily insert the 2 mm circlip and then, after the measured value has been calculated, replace it with the final circlip.
- Insert a 2 mm circlip -arrow-.
- Attach the Dial Indicator Holder -VW 387- to the transmission flange.



- For the first measurement, place the dial gauge measuring tip onto the input shaft as shown.
- Set the dial gauge to "0" with 2 mm pretension.
- Raise the dual clutch all the way upward.
- Read and note the measurement result (= input shaft axial play).
- For the second measurement, place the dial gauge measuring tip on the inner clutch plate carrier hub as shown.



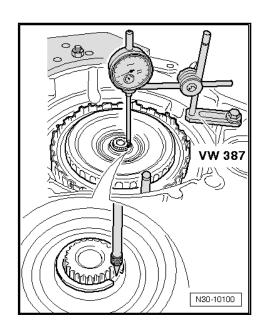
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- Set the dial gauge to "0" with 2 mm pretension.
- Raise the dual clutch all the way upward.
- Read and note the measurement result.

The new circlip is determined according to the following formu-

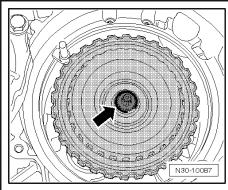
Circlip = 2. Measurement - 1. Measurement + 1.85 (= constant value)



The new circlips are staggered in 0.1 mm increments. Round to the closest number when selecting: up to 0.049 is rounded down, and from 0.050 is rounded up.

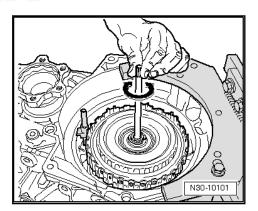
Example:

- Determined dimension for new circlip: 2.27 mm; new circlip rounded up to 2.3 mm thick.
- Determined dimension for new circlip: 2.24 mm; new circlip rounded down to 2.2 mm thick.
- If the measurement determined for the new circlip is 2 mm, the circlip that was inserted temporarily remains installed.
- Remove the 2 mm thick circlip that was temporarily inserted for measurement and replace with the circlip of the determined thickness.

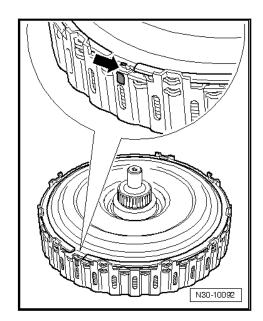


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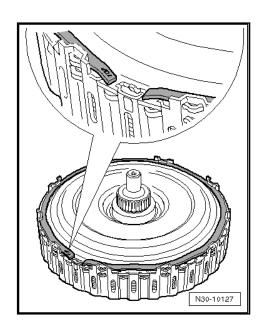
- The circlips may be used only tone time the correctness of information in this document. Copyright by AUDI AG.
- Dispose of the removed circlip that was inserted temporarily as well as the remaining circlips.
- Insert the pump shaft by lifting the pump shaft and turning it slightly -arrow- so that it slides all the way into the splines.



Insert the drive plate into the dual clutch.



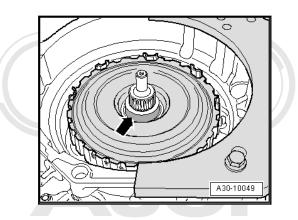
- The drive plate protruding tab -arrow- must be installed between the color-marked teeth or the markings that were applied later to the outer clutch plate carrier.
- Install the drive plate circlip.



- Installation position: the drive plate tab and the color-marked teeth or the markings that were applied later to the outer clutch plate carrier must lie between the ends of the circlip.
- Using a screwdriver, check to make sure the circlip is completely engaged.
- Remove the Clutch Retaining Bar -T10303- between the dual clutch and the housing.

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1. Clutch 21





Risk of leaks on the clutch end cover.

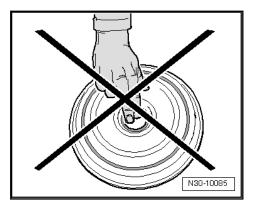
Transmission damage due to oil loss.

- Do not touch the seal in the inner opening of the clutch end cover!
- Do not load the clutch end cover by hitting with a hammer.
- Clean the contact surface for the outer clutch end cover seal.

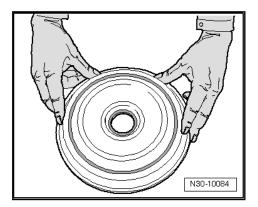


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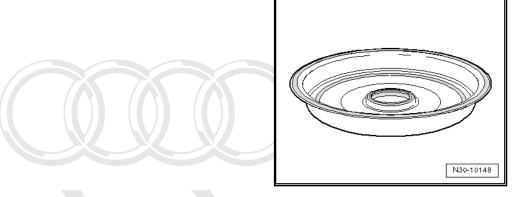


Remove the clutch end cover from the replacement part package. Only grab the clutch end cover at the outer edge.



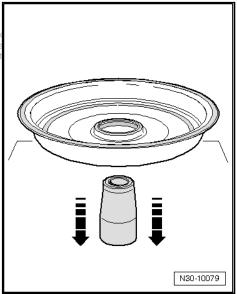
- Clean the end of the transmission shaft.
- Only the outer clutch end cover seal may be coated with transmission fluid.
- If there are stickers on the outside or inside of the clutch end cover, they must be removed without leaving any residue.

Clutch End Cover without Bushing:

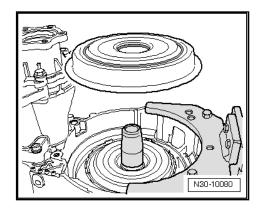


Place the Clutch Cover Plate Guide Sleeve -T10302- on a level surface.

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- To pre-form the inner seal on the new clutch end cover, guide the clutch end cover with the outer side facing downward evenly and horizontally over the Clutch Cover Plate Guide Sleeve -T10302-.
- Remove the Clutch Cover Plate Guide Sleeve -T10302- upward out of the clutch end cover.
- Place the Clutch Cover Plate Guide Sleeve -T10302- on the end of the dual clutch shaft.

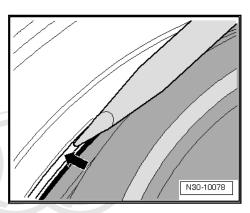




Risk of leaks on the clutch end cover.

Transmission damage due to oil loss.

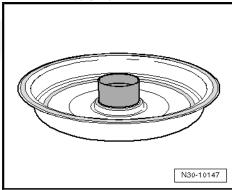
- Do not touch the seal in the inner opening of the clutch end cover!
- Do not load the clutch end cover by hitting with a hammer.
- Guide the clutch end cover with the outer side facing upward horizontally over the Clutch Cover Plate Guide Sleeve -T10302- and press it evenly into its seat.
- If necessary, carefully pry the clutch end cover into its seat with a screwdriver -arrow- as shown until the shaft ring can be installed.



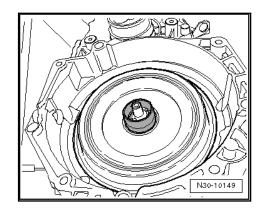
- Install the clutch end cover shaft ring in the transmission housing by counterholding the shaft ring on the opposite side so that it stays in its groove.
- Using a screwdriver, make sure the shaft ring is completely engaged.
- Remove the Clutch Cover Plate Guide Sleeve -T10302-.

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Insert the clutch end cover with the bushing.





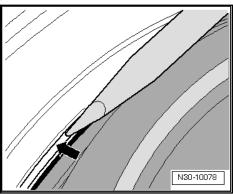
Risk of leaks on the clutch end cover.

Transmission damage due to oil loss.

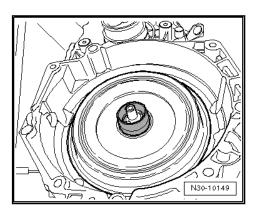
- Do not touch the seal in the inner opening of the clutch end cover!
- Do not load the clutch end cover by hitting with a hammer.
- Push the clutch end cover evenly into its seat.
- If necessary, carefully pry the clutch end cover into its seat with a screwdriver -arrow- as shown until the shaft ring can be installed.



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- Install the clutch end cover shaft ring in the transmission housing by counterholding the shaft ring on the opposite side so that it stays in its groove.
- Using a screwdriver, make sure the shaft ring is completely engaged.
- Remove the bushing (assembly aid).





Continuation for Both Clutch End Covers:

- Fill the transmission fluid for the dual clutch transmission after installing it. Refer to ⇒ F9.3 luid, Draining and Filling",
- Perform the basic setting using the \Rightarrow Vehicle diagnostic tester in <code>Guided Functions</code>.



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Controls, Housing

Shift Mechanism

- ⇒ -1.1 Selector Lever Handle", page 27
- ⇒ -1.2 Shift Mechanism", page 31
- ⇒ R1.3 elease from P", page 35
- ⇒ L1.4 ever Handle, Removing and Installing", page 40
- ⇒ i1.5 n Handle, Moving into Installation Position", page 44
- ⇒ M1.6 echanism, Removing and Installing", page 46
- ⇒ M1.7 echanism, Checking", page 48
- ⇒ L1.8 ever Cable, Checking and Adjusting", page 51
- ⇒ S1.9 haft Seal, Replacing", page 53

Overview - Selector Lever Handle

- ⇒ -1.1.1 Selector Lever Handle, Audi A3 and Q2", page 27
- ⇒ -1.1.2 Selector Lever Handle, Audi TT", page 28
- ⇒ -1.1.3 Selector Lever Handle, Audi A1", page 29
- ⇒ -1.1.4 Selector Lever Handle, Audi Q3", page 30

Overview - Selector Lever Handle, Audi A3 and Q2

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.

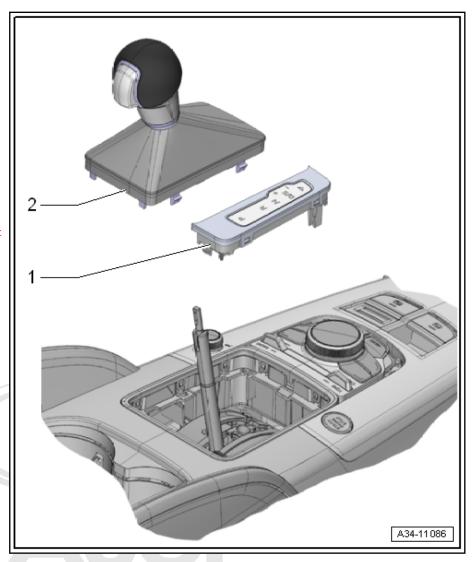
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1 - Selector Lever Transmission Range Position Display Unit -Y26-

Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.

2 - Selector Lever Handle

- With selector lever boot
- □ Removing and Installing. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page <u>40</u> .
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ i1.5 n Handle, Moving into Installation Position", page 44



Overview Selector Levery Handle, i Audie Timpart or in whole, is not 1.1.2

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.

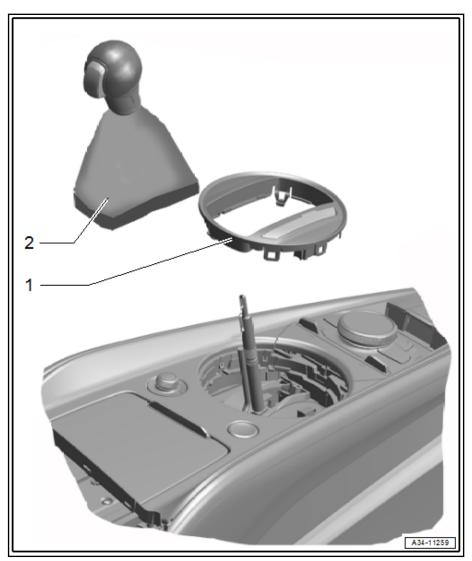


1 - Selector Lever Transmission Range Position Display Unit -Y26-

- ☐ Unit with trim
- Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.

2 - Selector Lever Handle

- With selector lever boot
- Removing and Installing. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page 40 .
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ i1.5 n Handle, Moving into Installation Position", page 44



1.1.3 Overview - Selector Lever Handle, Audi A1

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.



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1 - Selector Lever Handle

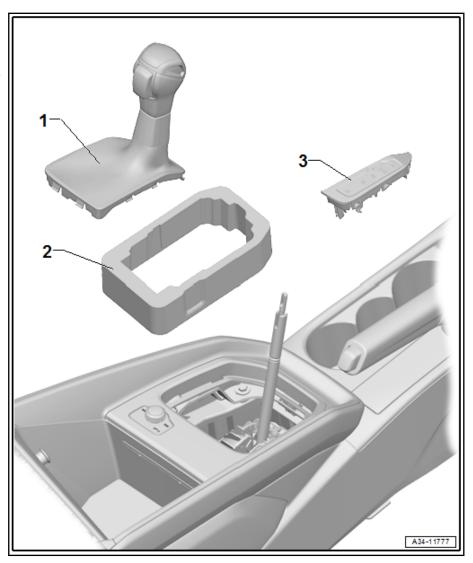
- With selector lever boot
- Removing and Installing. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page <u>40</u> .
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ i1.5 n Handle, Moving into Installation Position", page 44

2 - Insulation

- □ For selector housing
- Not for all vehicles

3 - Selector Lever Transmission Range Position Display Unit -Y26-

Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.



1.1.4 Overview - Selector Lever Handle, Audi Q3

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.



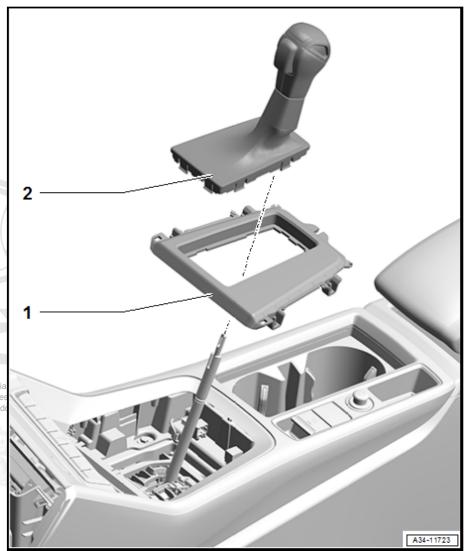
1 - Selector Lever Transmission Range Position Display Unit -Y26-

- ☐ Unit with trim
- Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.

2 - Selector Lever Handle

- □ With selector lever boot
- Removing and Installing. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page 40.
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ i1.5 n Handle, Moving into Installation Po-

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1.2 Overview - Shift Mechanism

⇒ -1.2.1 Shift Mechanism, Audi A3, Q2, Q3 and TT", page 31

⇒ -1.2.2 Selector Mechanism, Audi A1", page 33

1.2.1 Overview - Shift Mechanism, Audi A3, Q2, Q3 and TT

1 - Selector Lever Cable

- Cannot be replaced separately
- Do not lubricate

2 - Nut

- For selector mechanism to body
- Quantity: 4
- □ 8 Nm

3 - Bolt

- □ For the selector mechanism to the selector housing
- Quantity: 4
- □ 4 Nm

4 - Shift Mechanism

- ☐ The following components are combined into a single component
- Selector Lever -E313-
- Selector Lever Sensor System Control Module -JŠ87-
- Selector Lever Park Position Lock Switch -F319-
- Shift Lock Solenoid -N110-
- Selector Lever Cable
 - ☐ The components cannot be replaced separately
 - ☐ To check the components, use the ⇒ Vehicle diagnostic tester in Guided Fault Finding
 - Selector Mechanism Emergency Release. Refer to ⇒ R1.3 elease from P", page 35.
 - Shift Mechanism, Removing and Installing. Refer to <u>⇒ M1.6 echanism, Removing and Installing", page</u>

5 - Shifter Housing

6 - Base Plate

Replace after removing

7 - Clamps

Replace after removing

- □ Selector lever cable adjusting bolt
- ☐ Tightening specification: Refer to ⇒ page 53.

9 - Joint

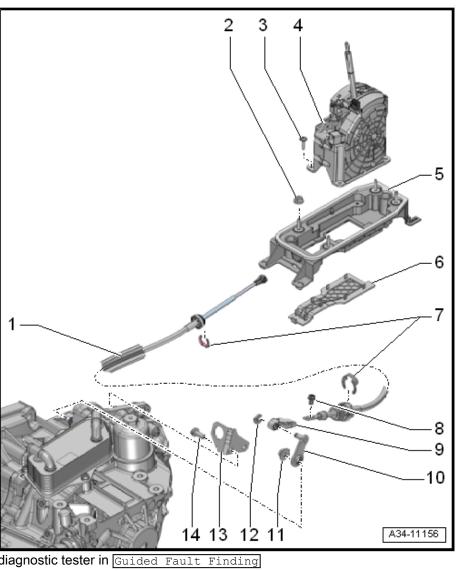
10 - Shift Lever

11 - Nut

□ 20 Nm

12 - Lock Washer

13 - Cable Bracket





- ☐ For the selector lever cable
- 14 Bolt
 - □ 15 Nm

Overview - Selector Mechanism, Audi A1 1.2.2



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1 - Handle with Shift Cover

□ Overview. Refer to ⇒ <u>-1.1.3 Selector Lever</u> Handle, Audi A1", page <u>29</u> .

2 - Shift Mechanism

- With integrated Selector Lever Sensor System Control Module -J587- with Selector Lever -E313-, Tiptronic Switch -F189-, Selector Lever Park Position Lock Switch -F319and Shift Lock Solenoid -N110-.
- Removing and Installing. Refer to ⇒ M1.6 echanism, Removing and Installing", page 46.

3 - Bolt

- Quantity: 4
- □ 8 Nm

4 - Plugs

Not available

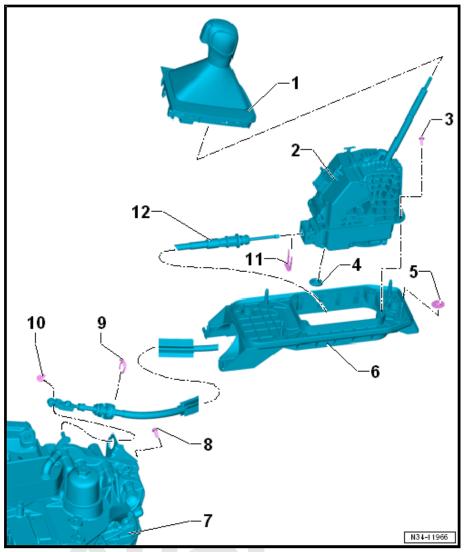
5 - Nut

- Quantity: 4
- 8 Nm

6 - Shifter Housing

Selector housing can only be replaced with the selector mechanism. Refer to ⇒

M1.6 echanism, Removing and Installing", page 46.



7 - Transmission

8 - Bolt

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☐ For attaching the cable bracket to the transmission

- □ Replace after removing
- □ 20 Nm+ 90°

9 - Lock Washer

Replace after removing

10 - Lock Washer

□ Replace after removing

11 - Lock Washer

Replace after removing

12 - Selector Lever Cable

- Selector lever cable can only be replaced with the selector mechanism. Refer to ⇒ M1.6 echanism, Removing and Installing", page 46
- ☐ Checking and Adjusting. Refer to ⇒ L1.8 ever Cable, Checking and Adjusting", page 51.



1.3 **Emergency Release from P**

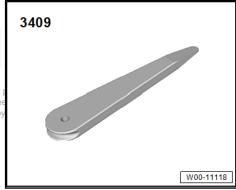
- ⇒ R1.3.1 elease from P, Audi TT", page 35
- ⇒ R1.3.2 elease From P, Audi A3 and Q2", page 36
- ⇒ R1.3.3 elease from P, Audi A1", page 38
- ⇒ R1.3.4 elease from P, Audi Q3", page 39

1.3.1 Emergency Release from P, Audi TT

Special tools and workshop equipment required

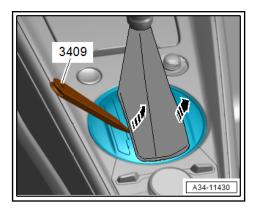
♦ Trim Removal Wedge -3409-



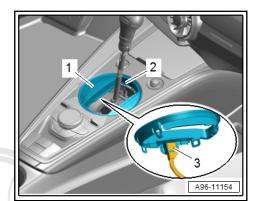


Procedure

- Move the selector lever into "D/S" position.
- Switch the ignition off.
- Pull the parking brake button to activate the electro-mechanical parking brake.
- Unclip the selector lever boot on both sides using the Trim Removal Wedge -3409- -arrows- and fold it upward.

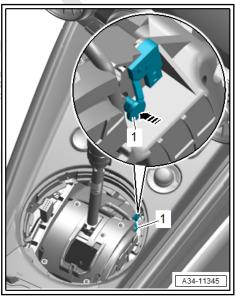


Release the catches -2- and remove the selector lever transmission range position display unit -1- upward.



- Disconnect the connector -3-.
- For example, release the Shift Lock Solenoid -item 1- in the -direction of the arrow- using a screwdriver and hold it in this position.



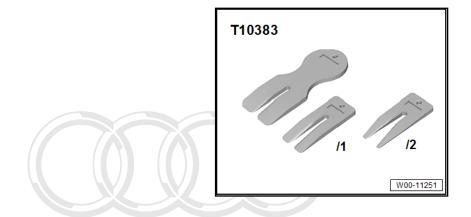


- The solenoid releases the selector lever.
- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the shift lock solenoid will mechanically lock the selector lever in the "P" position again. The solenoid must be released again.

1.3.2 Emergency Release From P, Audi A3 and Q2

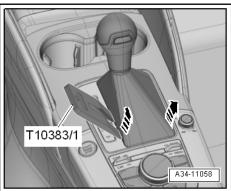
Special tools and workshop equipment required

Wedge Set -T10383-



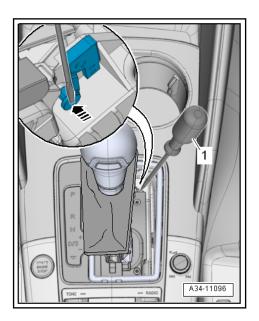
Procedure





- Pull the parking brake button to activate the electro-mechanical parking brake.
- Carefully pry out the selector lever boot with the Wedge Set -T10383/1- on both sides -arrows- and then fold it upward.

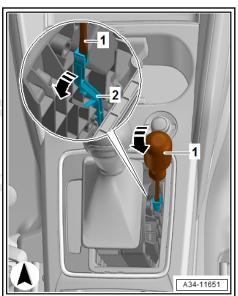
Audi A3:



For example, release the Shift Lock Solenoid in the -direction of the arrow- using a screwdriver -1- and hold it in this position.

Audi Q2:





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With a screwdriver will reference the release lever 72 his of guarantee or accept any liability does not guarantee or accept any liability difference of the arrow-toward the rear and hold it in this position.

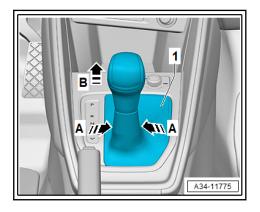
All Vehicles:

- The solenoid releases the selector lever.
- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the shift lock solenoid will mechanically lock the selector lever in the "P" position again.

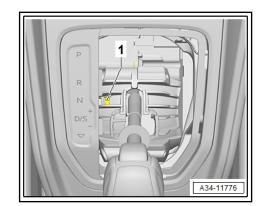
1.3.3 Emergency Release from P, Audi A1

Procedure

- Move the selector lever into "D/S" position.
- Switch the ignition off.
- Engage the parking brake.
- Using both hands, reach into the shift lever boot on the right and left sides -arrows- and unclip the shift cover -1- by pulling it upward -A arrows-.



With a screwdriver push the plastic part -1- from the top and hold it in this position.

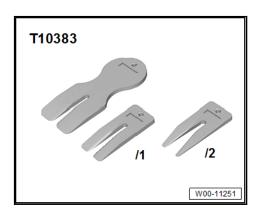


- The solenoid releases the selector lever.
- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the shift lock solenoid will mechanically lock the selector lever in the "P" position again.

1.3.4 Emergency Release from P, Audi Q3

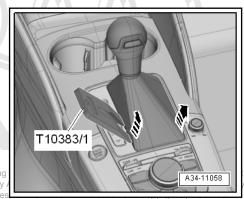
Special tools and workshop equipment required

♦ Wedge Set -T10383-



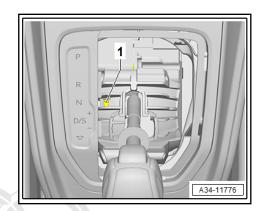
Procedure

- Move the selector lever into "D/S" position.
- Pull the parking brake button to activate the electro-mechanical parking brake.
- Carefully pry out the selector lever boot with the Wedge Set -T10383/1- on both sides -arrows- and then fold it upward.



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With a screwdriver push the plastic part -1- from the top and hold it in this position.



- The solenoid releases the selector lever.
- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the shift lock solenoid will mechanically lock the selector lever in the "P" position again.

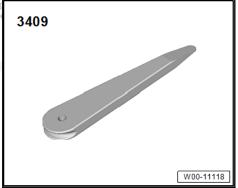
Selector Lever Handle, Removing and 1.4 Installing

Special tools and workshop equipment required

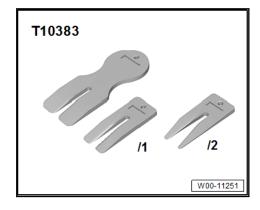
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Trim Removal Wedge -3409-itted unless authorised by AUDI AG. AUDI AG does not g

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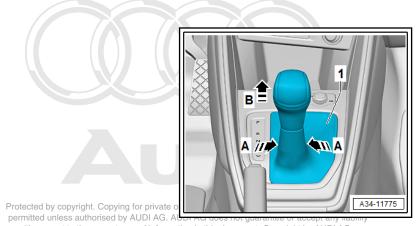
Wedge Set -T10383-



Removing

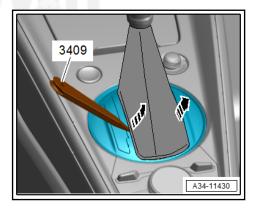
- Engage the parking brake.
- Move the selector lever into "D/S" position.
- Switch the ignition off.

Audi A1:



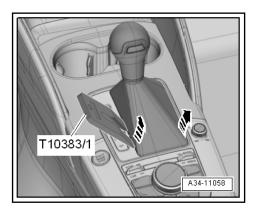
ess of information in this document. Copyright by AUDI AG. Using both hands, reach into the shift lever boot on the right and left sides -arrows- and unclip the shift cover -1- by pulling it upward -A arrows-.

Audi TT:



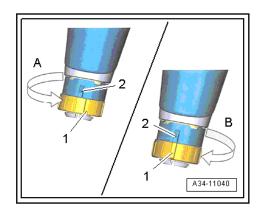
Unclip the selector lever boot on both sides using the Trim Removal Wedge -3409- -arrows- and fold it upward.

Audi A3, Q2, Q3:



Carefully pry out the selector lever boot with the Wedge Set -T10383/1- on both sides -arrows- and then fold it upward.

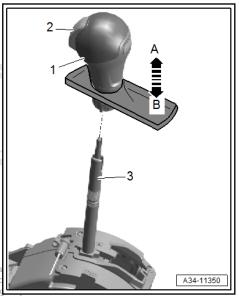
All Vehicles:



- Turn the locking ring all the way in the -direction of arrow A-.
- The tab -1- on the locking ring is offset to the tab -2- on the selector lever handle.
- Remove the selector lever handle -1- upward with the selector lever boot -arrow A- without touching the locking button

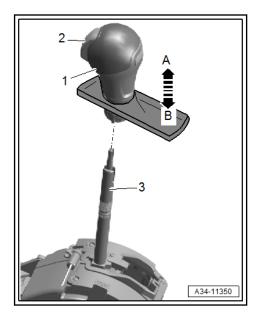








Installing



Install in the reverse order of removal while noting the following:

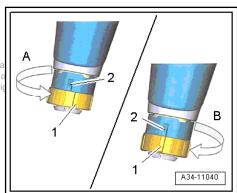
The locking button -2- points in the direction of travel.

NOTICE

Risk of damaging the selector mechanism by incorrectly installing the selector lever.

- Do not press the locking button on the selector lever handle.
- Press the selector lever handle -1- completely onto the selector lever -arrow B- without touching the locking button -2-.
- The selector lever handle must engage into the ring groove on the selector lever.
- Turn the locking ring all the way in the -direction of arrow B-.

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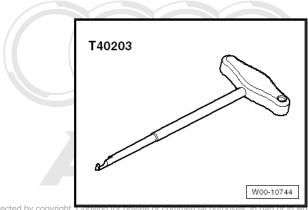
- It must be possible to turn the locking ring. If necessary, press the selector lever handle again.
- The tab -1- on the locking ring is under the tab -2- on the selector lever handle.
- The selector lever handle is only properly locked if the locking ring was turned. Only then may the locking button on the handle be pressed.

- The locking button may have an increased resistance to pressure the first time it is pushed after installing the selector lever handle.
- Press the locking button on the selector lever handle.
- Fold the selector lever boot downward and clip it in.
- Check the selector mechanism. Refer to <u>⇒ M1.7 echanism</u>, Checking", page 48

1.5 Button in Handle, Moving into Installation Position

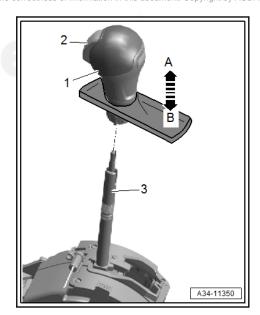
Special tools and workshop equipment required

◆ Locking Button Removal Tool -T40203-

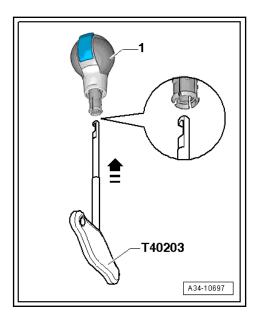


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Procedure



- The locking button -2- sticks out in its installation position on the selector lever handle.
- If the locking button was pressed in, it must be brought back to its installation position so that the selector lever handle can be installed.
- Carefully guide the Locking Button Removal Tool -T40203all the way into the selector lever handle -1- -arrow-.

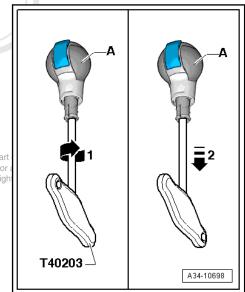


- For reasons of clarity, the selector lever handle is shown without the selector lever boot. The selector lever boot cannot be removed from the handle.
- The opening on the Locking Button Removal Tool -T40203faces the locking button and the hook to the left.
- Hold the selector lever handle -A- firmly and turn the Locking Button Removal Tool -T40203- 180° in the -direction of arrow 1-.

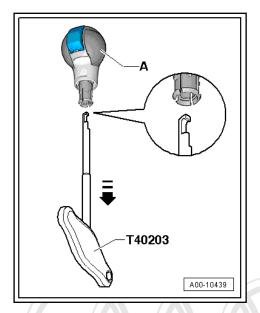


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- Hold the selector lever handle firmly and carefully remove the Locking Button Removal Tool -T40203- -arrow 2-.
- When removing the Locking Button Removal Tool -T40203-, the locking button on the selector lever handle -A- is pushed out and locked.



Do not touch the locking button anymore before installing the selector lever handle so that the locking button does not fall back in.

1.6 Shift Mechanism, Removing and Installing

Removing

Remove the selector lever handle. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page 40.

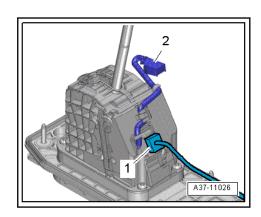
Audi A3, Q2, Q3, TT: Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

- Remove the Selector Lever of Languissions Range Loosillo bocument. Copyright by AUDI AG. Display Unit -Y26-. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.
- Remove the center console insert. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console Insert, Removing and Installing.

Audi A1:

Remove the center console. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console, Removing and Installing.

All Vehicles:



Release and disconnect the connector -1- from the selector mechanism to the vehicle wiring harness.



- If necessary, remove the air filter housing:
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.
- TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.

Audi A3, Q2:

Remove the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

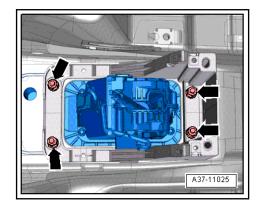
Audi Q3:

Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

All Vehicles:



- Remove the clamp -2-.
- Push the lock washer -3- upward -arrow- and remove it.
- -proRemove the selector lever cable from the selector lever is not
- Remove the tunnel heat shield. Refer to -> Body Exterior; Rep. Gr. 66; Trim Strips / Trim / Extensions / Trim Panels.
- A1, Q2 and Q3: Remove the heat shield for the tunnel. Refer to ⇒ Body Exterior; Rep. Gr. 66; Heat Shields; Component Location Overview - Heat Shields.
- Remove the nuts -arrows- in the vehicle interior.



- A second technician is required under the vehicle to remove the selector mechanism function unit.
- Remove the selector mechanism downward with the selector lever cable. Guide the selector lever cable out of the cable bracket at the same time.

NOTICE

Risk of damaging the operating cable by deforming it.

Never bend the operating cable too sharply or kink it.

Installing

Install in the reverse order of removal while noting the following:



Risk of damaging the operating cable by deforming it.

- Never bend the operating cable too sharply or kink it.
- Adjust the selector lever cable. Refer to <u>⇒ L1.8 ever Cable</u>, Checking and Adjusting", page 51
- Check the selector mechanism and the closing locks. Refer to ⇒ M1.7 echanism, Checking", page 48

Tightening Specifications

- Refer to ⇒ -1.2 Shift Mechanism", page 31
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Heat Shields; Component Location Overview - Heat Shields.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

1.7 Shift Mechanism, Checking

Overview:

- 1. Selector Mechanism Function Test. Refer to ⇒ page 48.
- 2. Checking the ignition key lock Refer to Repeat 49 rantee or accept any liability
- ment. Copyright by AUDI AG. 3. Checking the closing locks. Refer to ⇒ page 50
- 4. Checking the selector lever handle locking button. Refer to \Rightarrow page 50.
- 5. Checking the connectors on the selector mechanism. Refer to <u>⇒ page 51</u>.

1. Selector Mechanism Function Test

- Never operate the starter when the selector lever is in "D/S", "R" and the "tiptronic gate".
- If the selector lever position "N" is selected at speeds greater than 5 km/h (3.1 mph), the shift lock solenoid does not engage and locks the selector lever. The selector lever can be shifted into another position.
- If the selector lever position "N" is selected at speeds below 2 km/h (1.2 mph) (almost stopped), the shift lock solenoid may only engage after approximately one second. The selector lever can only be moved out of "N" when the brake pedal is pressed.

Selector lever in "P" position:

- Pull the parking brake button to activate the electro-mechanical parking brake.
- Switch the ignition off.
- The selector lever is locked and cannot be shifted out of the "P" position when the locking button on the selector lever handle is pressed.



- To reach the "ignition on" position, briefly press the ignition key in the ignition lock or the Access/Start Authorization Button -E408-.
- Do not press the brake pedal.
- The selector lever is locked and cannot be shifted out of the "P" position when the locking button on the selector lever handle is pressed. The Shift Lock Solenoid -N110- locks the selector lever.
- Press the brake pedal and hold.
- The Shift Lock Solenoid -N110- unlocks the selector lever. It is possible to select a gear. Press the locking button on the selector lever handle and slowly move the selector lever from "P" through "R, N, D/S". While doing this, check if the Transmission Range Display -Y6- in the instrument cluster matches the selector lever position.
- Pull the selector lever toward the rear out of "D/S" and then release it again.
- The selector lever moves automatically back into "D/S" selector lever position. The Transmission Range Display -Y6in the instrument cluster must switch from "D" to "S1" and then go back to "D" after pulling the lever toward the rear.

Selector lever in "N" and ignition switched on:

- Do not press the brake pedal.
- After a brief wait time: the selector lever is locked and cannot be moved out of "N" even though the locking button on the selector lever handle is pressed. The Shift Lock Solenoid -N110- locks the selector lever.
- Press the brake pedal.
- The Shift Lock Solenoid -N110- unlocks the selector lever. It is possible to shift into "D/S" position.

Selector lever in "D/S" position and ignition switched on:

- Guide the spelector lever into the "tipfronic gate" part or in whole, is not permitted unless authorised by AUDI AG, AUDI AG does not grantee or accept any liability
- The "D/S" symbol illumination in the Selector Level Trans-AG mission Range Position Display Unit -Y26- must turn off and the "+" and "-" symbols must turn on.
- The Transmission Range Display -Y6- in the instrument cluster must switch from "D" to "M1" when moving the selector lever in the "tiptronic gate"

If the specified values are not obtained:

- Use the ⇒ Vehicle diagnostic tester in Guided Fault Finding for Fault Finding.
- Adjust the selector lever cable. Refer to \Rightarrow L1.8 ever Cable, Checking and Adjusting", page 51 .
- Check the locking button on the selector lever handle. Refer to \Rightarrow page 50.

2. Ignition Switch Key Lock, Checking

- Pull the parking brake button to activate the electro-mechanical parking brake.
- Do not press the brake pedal.
- Press the key briefly in the ignition lock to reach the "ignition on" position.
- Press the brake pedal and hold.

6-Speed Dual Clutch Transmission 0D9 - Edition 03.2023

- It must be possible to move the selector lever out of "P" without "getting stuck" when the locking button in the selector lever handle is pressed.
- Switch the ignition off.
- It should not be possible to remove the ignition key when the selector lever is in any other position than "P".
- Move the selector lever into "P" position.
- Remove the ignition key.
- The ignition key must only be able to be removed in selector lever position "P".
- The selector lever does not move out of "P" even though both the locking button and the brake pedal are pressed.

If the ignition switch key lock does not work as described:

Use the ⇒ Vehicle diagnostic tester in Guided Fault Finding for Fault Finding.

3. Checking Locks for Vehicles with Keyless Stop and Start **System**

- Press the Access/Start Authorization Button -E408- briefly to attain the "ignition on" setting.
- Do not move the selector lever into "P" but rather, for example, into "N".
- Switch the ignition off.
- A warning message must be displayed in the instrument cluster.
- The vehicle cannot be locked.
- Switch on the ignition and shift the selector lever into the "P" position.
- Switch the ignition off.
- The vehicle can be locked.

If the specified values are not obtained:

- Use the ⇒ Vehicle diagnostic tester in Guided Fault Finding for Fault Finding.
- Adjust the selector lever cable. Refer to \Rightarrow L1.8 ever Cable, Checking and Adjusting", page 51.
- Check the locking button on the selector lever handle. Refer to \Rightarrow page 50.

4. Lock Button on Selector Lever Handle, Checking

Locking Button, Checking Ease of Movement:

- te or commercial purposes, in part or in whole, is not It must be possible to press the locking outton without using. AUDI AG does not guarantee or accept any liability great force. with respect to the correctness of information in this document, Copyright by AUDI AG.
- After releasing it, the locking button must come all the way back out by itself.
- If the specified values are not reached, check if the selector lever handle was installed correctly. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page 40.
- Make sure the selector lever is not bent.

Function test:

The ignition is switched on.

The locking button on the selector lever handle must be pressed for the following gear changes. If the locking button is not pressed, the selector lever cannot be shifted into the specified position.

- "P" into "R" and also press the brake pedal
- "N" into "R"; stationary, also press the brake pedal after a longer wait time
- ◆ "R" into "P"

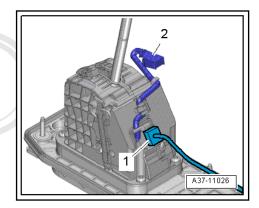
If the specified values are not obtained:

- Check that the selector lever handle was installed correctly. Refer to ⇒ L1.4 ever Handle, Removing and Installing", page <u>40</u> .
- Check the connectors on the selector mechanism.
- Check the Shift Lock Solenoid -N110- using the ⇒ Vehicle diagnostic tester in Guided Fault Finding.
- Adjust the selector lever cable. Refer to ⇒ L1.8 ever Cable, Checking and Adjusting", page 51

5. Connectors on Selector Mechanism, Checking

Before repairing or inspecting the connectors, check all control modules in the vehicle for DTC memory entries using the \Rightarrow Vehicle diagnostic tester in Guided Fault Finding. If required, correct any faults.

Check the connectors. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.



- Connector for connecting lines from the selector mechanism function unit to the transmission (with CAN bus wires) and to the Shift Lock Solehold FN 10-1 and Selection tee or accept any liability Lever Park Positions Lock Switchne 319 ormation in this do
- Selector Lever Transmission Range Position Display Unit

Selector Lever Cable, Checking and 1.8 Adjusting

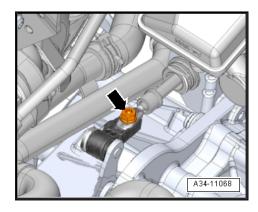
Test Conditions

- Selector mechanism and selector lever cable move easily when shifting.
- The selector lever cable rubber grommet is not damaged.

Selector Lever Cable, Adjusting

The selector lever cable must be adjusted if:

- The selector lever cable was removed from the transmis-
- The engine and (or) transmission were removed and instal-
- The selector lever cable was removed and installed with the selector mechanism.
- The selector lever cable was removed and installed.
- The engine/transmission position was changed, for example, were installed without tension.
- Move the selector lever into "P" position.
- Remove the air filter housing:
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.
- TFSI. Refer to See Rep. Gr > 24 Air Filter Air Filter Housing cept any liability Removing and installing chass of information in this document. Copyright by AUDI AG. Removing and Installing
- Loosen the adjusting bolt -arrow- for the selector lever cable.



- Set the selector lever on the transmission to "P". Push the selector lever all the way to the rear opposite the direction of travel to check it.
- To release the selector lever cable tension, carefully move the selector lever forward and back slightly, but do not shift into another selector lever position.
- Tighten the adjusting bolt -arrow-. The position of the selector lever cable must not change while doing this.

Selector Lever Cable, Checking Adjustment

- Press the button and move the selector lever to the rear approximately 5 mm out of "P" and hold it there. Do not move it into "R".
- Release the selector lever.
- The selector lever must jump back into "P" by itself.
- Move the selector lever into "N".
- Press the button and move the selector lever to the rear approximately 5 mm out of "N" and hold it there. Do not move it into "D/S".
- Release the selector lever.
- The selector lever must jump back into "N" by itself.
- Press the button and move the selector lever forward approximately 5 mm out of "N" and hold it there. Do not move it into "R".



- Release the selector lever.
- The selector lever must jump back into "N" by itself.
- If the selector lever does not react as described, repeat the adjustment.
- Check the selector mechanism. Refer to ⇒ M1.7 echanism, Checking", page 48.

Tightening Specifications

Component	Tightening Specification
Selector lever cable adjusting bolt	13 Nm

1.9 Selector Shaft Seal, Replacing

Procedure

- The transmission is installed.
- Remove the air filter housing:
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removinged and another in the state of the stat
- ◆ TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter, Air Filter Housing, Removing and Installing.

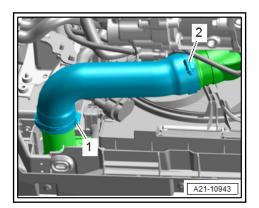
Audi A3, Q2, Q3:

Remove the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

All Vehicles:

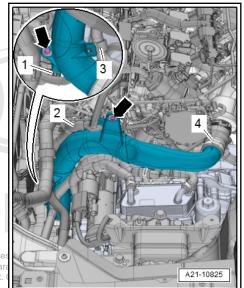
Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and

Vehicles with 1.8L/2.0L TFSI Engines:



- If installed, loosen the hose clamp -1- and remove the air duct hose from the charge air cooler.
- Vehicles with left auxiliary radiator: free up the coolant hose -3-.

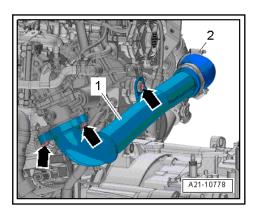




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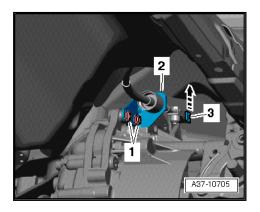
- Free up the wiring harnesses -1 and 2- at the air duct pipe.
- Loosen the screw-type clamp -4-.
- Remove the bolts -arrows- and remove the air duct pipe.

Vehicles with TDI engines:



Loosen the screw-type clamp -2- and bolts -arrows- and remove the air duct pipe -1-.

All Vehicles:



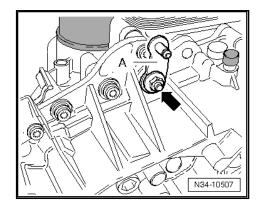
- Remove the clamp -2-.
- Push the lock washer -3- upward -arrow- and remove it.
- Push the selector lever cable off of the selector lever and press it slightly toward the rear.



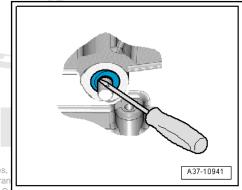


Risk of damaging the operating cable by deforming it.

- Never bend the operating cable too sharply or kink it.
- Remove the nut -arrow-.



- Carefully pry the selector lever -A- off the selector shaft.
- Pierce the seal using a small screwdriver and pull it out.



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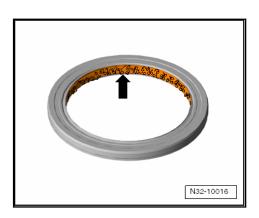
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NOTICE

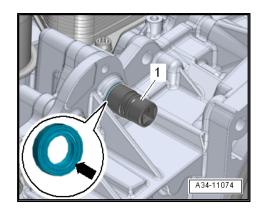
Risk of damaging the contact surface.

A proper seal can no longer be ensured if there is damage to the contact surface.

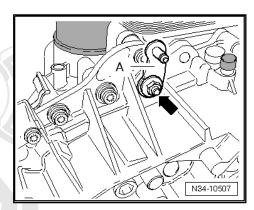
- Position the screwdriver carefully.
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Drive the seal in all the way using a 15 mm socket -item 1-. Do not tilt the seal when doing so.



- The closed side of the seal -arrow- faces outward.
- Place the selector lever -A- on the selector shaft and fasten -arrow-.



- The selector lever only fits onto the splines in one position.
- Press the selector lever cable onto the selector lever and primary private or primary private or pr adjust the selector lever cable. Refer to ≥1.1.8 ever Cable, does not guarantee or accept any liability Checking and Adjusting", pages 51t to the correctness of information in this document. Copyright by AUDI AG.

Tightening Specifications

- Refer to ⇒ -1.2 Shift Mechanism", page 31
- Refer to ⇒ Rep. Gr. 21; Charge Air System; Overview -Charge Air Hose Connections.
- Refer to \Rightarrow Rep. Gr. 24; Air Filter; Overview Air Filter Housing for TFSI or \Rightarrow Rep. Gr. 23; Air Filter; Overview Air Filter Housing for TDI.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

2 Transmission, Removing and Installing

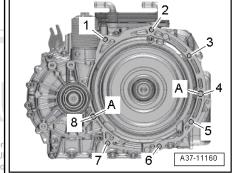
- ⇒ T2.1 ightening Specifications", page 57
- ⇒ R2.2 emoving", page 58
- ⇒ I2.3 nstalling", page 85

2.1 **Transmission Tightening Specifications**

- The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.
- Additional lubricant such as engine oil or transmission fluid may be used, but do not use lubricant containing graphite.
- Do not use any ungreased parts.
- Tightening specification tolerance: ± 15%.
- Replace the bolts that were tightened with an additional turn.
- Replace the self-locking nuts and bolts as well as gaskets, seals and O-rings.
- Secure all hose connections with hose clamps that match those used in production. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Bring all cable ties back to the same positions during installation.

Component		Nm
Bolts and nuts	M6	9
	M7	15
	M8	20
	M10	40
_	M12	65

Dual-clutch transmission to engine 1.8L/2.0L TFSI / 2.0L TDI:

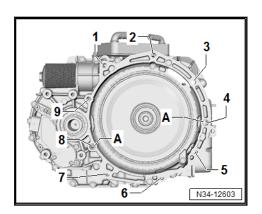


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Item	Bolt	Nm
1, 2 and 3	M12x55	80
4	M12x65	80
5, 6 and 7	M10x50	40
8	M12x65	80
Α	Alignment sleeves for centering	

	Item	Bolt	Nm
•	The bolt -3- is only accessible via the opening for the removed starter.		

Dual-clutch transmission to engine 1.4L TFSI:



Item	Bolt	Nm
1 and 3	M12x55	80
2	M12x65	80
4, 8 and 9	M12 x 70	80
5, 6 and 7	M10x50	40
A	Alignment sleeves for centering	

The bolt -3- is only accessible via the opening for the removed starter.

2.2 Transmission, Removing

- ⇒ R2.2.1 emoving, Audi A3, Q2, TT", page 58
- ⇒ R2.2.2 emoving, Audi A1", page 69
- ⇒ R2.2.3 emoving, Audi Q3", page 79

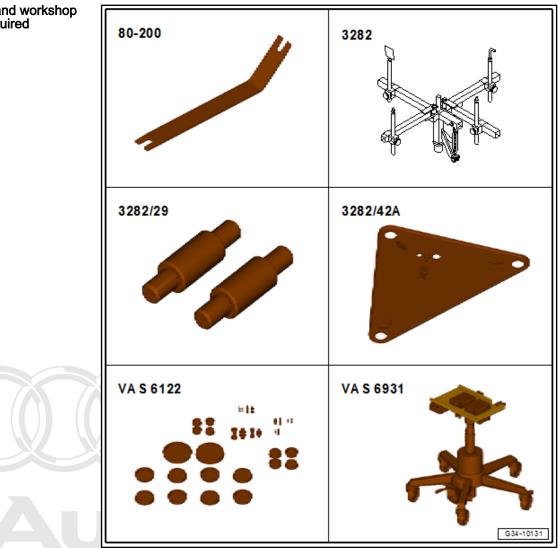
Transmission, Removing, Audi A3, Q2, TT 2.2.1



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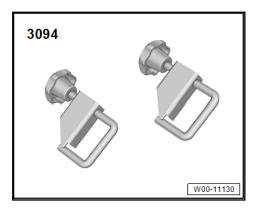


Special tools and workshop equipment required



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- ♦ Transmission Support -3282-
- ◆ Transmission Support Pins 29 -3282/29-
- ♦ Transmission Support Mounting Plate 42A -3282/42A-
- ♦ Engine Bung Set -VAS 6122-
- ♦ Engine and Gearbox Jack -VAS 6931-

Hose Clamps - Up To 25 mm -3094-



Procedure

- Pay attention to the general information. Refer to ⇒ I3.1 nformation", page 5
- Follow the guidelines for clean working conditions. Refer to ⇒ f3.3 or Clean Working Conditions", page 6
- Pay attention to the general repair information. Refer to ⇒ R3.4 epair Information", page 7
- Bring all cable ties back to the same positions during instal-
- Move the selector lever into "P" position.
- Engage the parking brake.
- Switch the ignition off.
- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Remove the air filter housing:
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.
- TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.

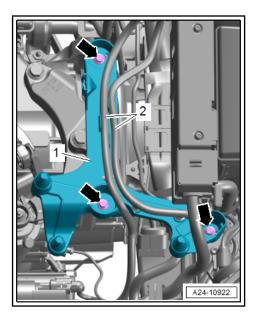
Audi A3, Q2:

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Remove the battery tray. Refer to Electrical Equipment, AUDI AG does not guarantee or accept any liability Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

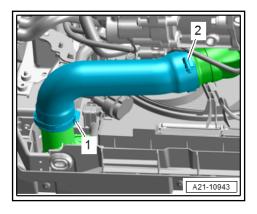


Audi TT:



- Free up the wires -2- on the air filter housing bracket -1-using the Pry Lever -80-200-.
- Remove the bolts -arrows- and remove the bracket.

Vehicles with TFSI engines:



- If installed, loosen the hose clamp -1- and remove the air duct hose from the charge air cooler.
- Vehicles with left auxiliary radiator: free up the coolant hose -3-.



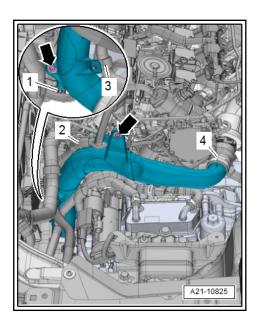
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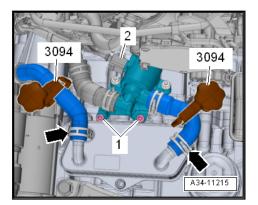






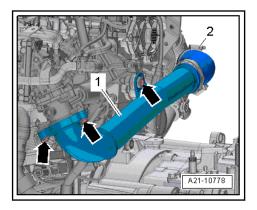
- Free up the wiring harnesses of and 2-at the airduct pipe.
- Loosen the screw-type clamp -4-.
- Remove the bolts -arrows- and remove the air duct pipe.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps Up To 25mm -3094-.



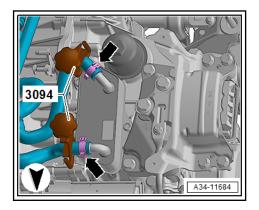


- Place a cloth underneath to catch any leaking coolant.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission fluid cooler.
- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS 6122-.
- If equipped, remove the bolts -1- and move the Transmission Coolant Valve -N488- to the side.
- Disconnect the connector -2-, if equipped.

Vehicles with TDI engines:

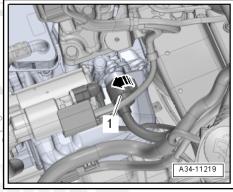


- Loosen the screw-type clamp -2- and bolts -arrows- and remove the air duct pipe -1-.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm -3094-.



- Place a cloth underneath to catch any leaking coolant.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission fluid cooler.
- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS 6122-.

All Vehicles:



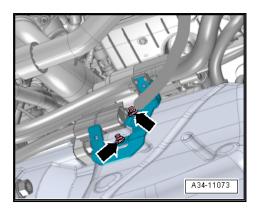
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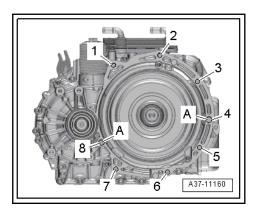
Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.

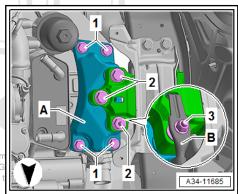
- Turn the twist lock counter-clockwise -arrow- to disconnect the connector -1- for the Dual-Clutch Transmission Mechatronic -J743-.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Remove the nuts -arrows- and remove the front bracket from the transmission fluid pan.



Remove all of the bolts for the transmission/engine connection that are accessible from above.

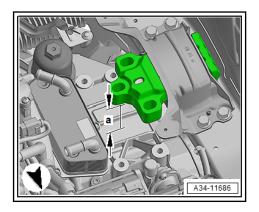


- The screw -3- is located in the opening for the starter.
- Remove the subframe without the steering gear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe without Steering Gear, Removing and Installing.
- Support the engine in the installation position. Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Engine, Supporting in Installation Position.
- If equipped, loosen the nut -3- and remove the ground wire -B-.



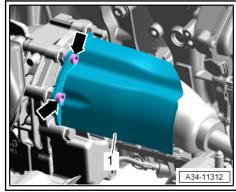
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- Remove the bolts -1 and 2- and remove the transmission support -A-.
- Lower the engine/transmission assembly using the Engine Support Bridge Spindle -10 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.



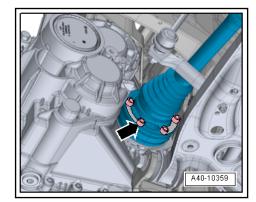
- Dimension -a- = maximum 65 mm.
- Remove the nuts -arrows- and remove the right drive axle heat shield. (different versions)





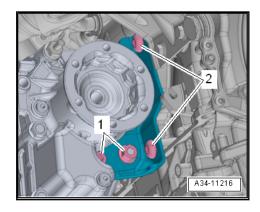
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Remove the left and right drive axid Larrows from the transept any liability mission. Refer to ⇒ Suspension, Wheels, Steering, Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.

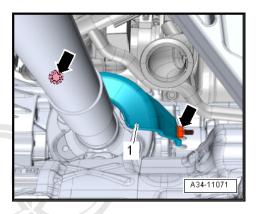


- Tie up the drive axles to the rear.
- Make sure that the drive axle protective coating is not damaged.

AWD vehicles:

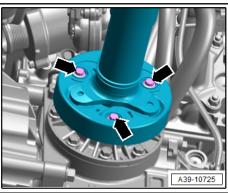


- Remove the bolts -1 and 2- and remove the bevel box brack-
- Remove the bolts -arrows- and remove the heat shield -1-.

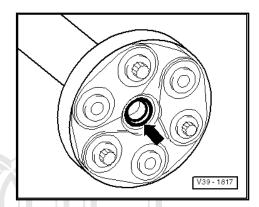


Label the position of the flexible disc and the bevel box flange facing each other for reinstallation.





- Remove the driveshaft from the bevel box -arrows- by counterholding at the triangular flange using a lever.
- Push the engine/transmission assembly forward slightly (toward the front end) and remove the driveshaft from the bevel box.



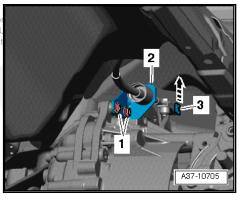


Leaks due to damaged seal.

- Push the driveshaft horizontally toward the rear.
- If the seal is damaged, the driveshaft must be replaced.

All Vehicles:

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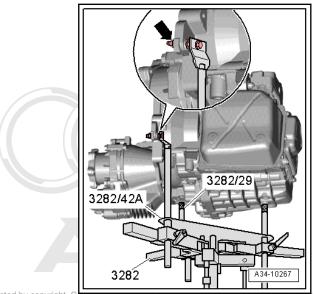
- Remove the bolts -1- from the cable bracket.



Risk of damaging the operating cable by deforming it.

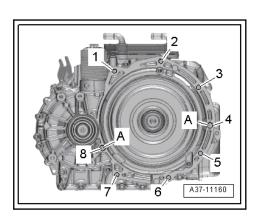
- Never bend the operating cable too sharply or kink it.
- Remove the lock washer -3- -arrow- and remove the selector lever cable from the transmission.

The Transmission Support -3282- is set up with the Transmission Support - Mounting Plate 42A -3282/42 A- to remove the dual clutch transmission 0D9.



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- Place the Transmission Support -3282- on the Engine and to the correctness of information in this document. Copyright by AUDI AG. Gearbox Jack -VAS 6931-
- Align the transmission support arms so that they match up with the holes in the Transmission Support - Mounting Plate 42A -3282/42 A-.
- Install the support elements as shown on the Transmission Support - Mounting Plate 42A -3282/42A- The "retaining plate with hole" is used as a front support element.
- Place the Engine and Gearbox Jack -VAS 6931- under the vehicle.
- The arrow symbol on the mounting plate points in the direction of travel.
- Align the Transmission Support -3282- so that it is parallel to the transmission.
- Install the Transmission Support Pins 29 -3282/29- in the transmission.
- Attach the "retaining plate with hole" securely to the transmission as shown -arrow-.
- Insert the last support element into the transmission as shown.
- Support the transmission from underneath using the Engine and Gearbox Jack -VAS 6931-.
- Remove the remaining bolts for the transmission/engine connection.



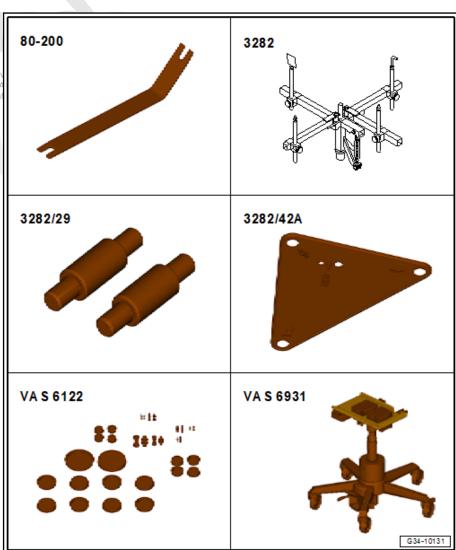


- Remove the transmission from the alignment sleeves.
- Remove the transmission from the engine.
- Lower the transmission carefully using the Engine and Gearbox Jack -VAS 6931-.
- When lowering, change the transmission position using the spindles on the Transmission Support -3282-.

2.2.2 Transmission, Removing, Audi A1

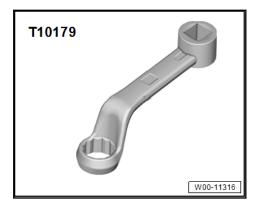
Special tools and workshop equipment required

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- ♦ Pry Lever -80-200-
- Transmission Support -3282-
- Transmission Support Pins 29 -3282/29-
- Transmission Support Mounting Plate 42A -3282/42A-
- Engine Bung Set -VAS 6122-
- Engine and Gearbox Jack -VAS 6931-

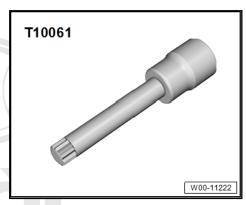
Insert Tool - 18mm -T10179-



Hose Clamps - Up To 25 mm -3094-

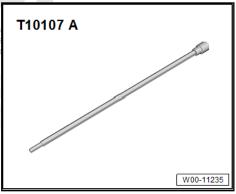


Socket - Xzn 14 -T10061-

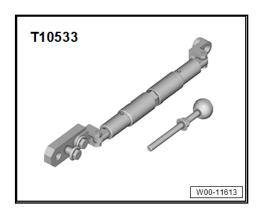


Socket and Extended Bit -T10107 A-

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Engine Support -T10533-

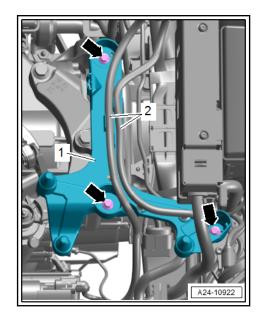


Procedure

- Move the selector lever into "P" position.
- Engage the parking brake.
- Switch the ignition off.
- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Disconnect the luggage compartment battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Disconnecting and Connecting.
- Remove the air filter housing. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Remove the bracket for the jumper cable post from the bracket and tilt it to the side. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery Jump Start Terminal; Battery Jump Start Terminal, Removing and Installing.

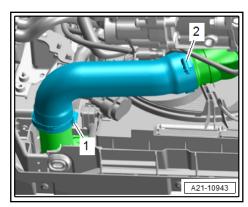
Protected by Freegup the wires #2 on the air filter housing bracket -1permitted unusing the PryAlever A80-200es not guarantee or accept any liat with respect to the correctness of information in this document. Copyright by AUDI AG.





- Remove the bolts -arrows- and remove the bracket.
- Loosen the hose clamp -1- and -2- and remove the air duct hose.



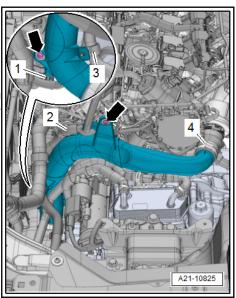


- Free up the coolant hose -3-.

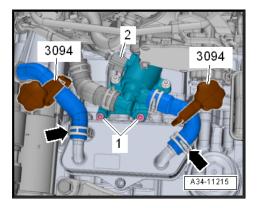


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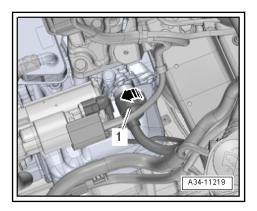


- Free up the wiring harnesses -1 and 2- at the air duct pipe.
- Loosen the screw-type clamp -4-.
- Remove the bolts -arrows- and remove the air duct pipe.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm -3094-.



- Place a cloth underneath to catch any leaking coolant.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission fluid cooler.
- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS 6122-.

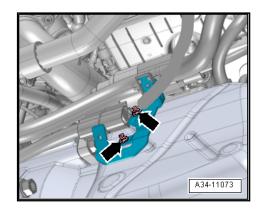
- Remove the bolts -1- and move the Transmission Coolant Valve -N488- to the side.
- Release and disconnect the connector -2-.
- Turn the twist lock counter-clockwise -arrow- to disconnect the connector -1- for the Dual-Clutch Transmission Mechatronic -J743-.





Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Remove the nuts -arrows- and remove the front bracket from the transmission fluid pan.

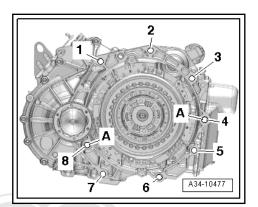


Remove all of the bolts for the transmission/engine connection that are accessible from above. If necessary, use the Insert Tool - 18mm -T10179-.

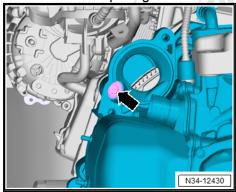


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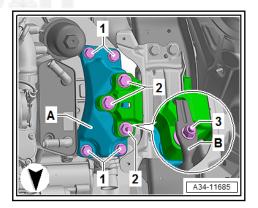


The screw -3- is located in the opening for the starter.

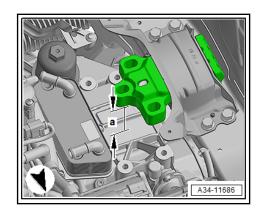


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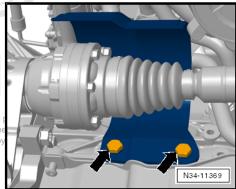
- Support the engine in the installation position. Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Engine, Supporting in Installation Position.
- Remove the bolts -1- and -2-.



- Remove the transmission bracket -A-.
- Lower the engine/transmission assembly using the Engine Support Bridge Spindle -10 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.

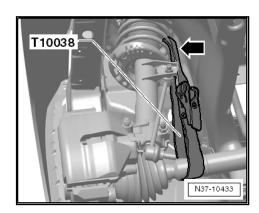


- Dimension -a- = maximum 65 mm.
- Remove the left drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.
- Remove the right drive axle heat shield -arrows-. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle Heat Shield, Removing and Installing.



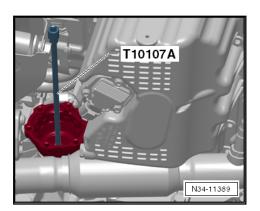
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- Remove the right drive axle from the transmission. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.
- Secure the drive axle to the suspension strut using a Tensioning Strap -T10038-.



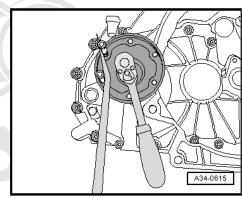
Do not damage the surface of the shaft.

Remove the right transmission flange shaft using the Socket And Extended Bit -T10107 A-.

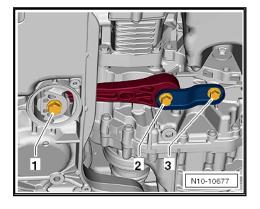


The bolt has a 6 mm inner hex socket. The bolt can also be removed and installed using the Long Hex Socket -V.A.G 1669-.

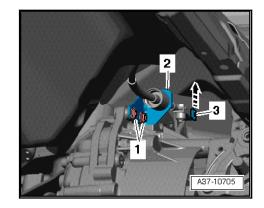
To remove and install the flange shaft, install two bolts into the flange and counterhold it using a tire iron.



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- Close the opening in the drive axle flange with a suitable plug.
- Remove the exhaust system front section from the engine and secure it from falling down. Refer to ⇒ Rep. Gr. 26; Emissions Control System.
- Remove the pendulum support. Remove the bolt -1- first and then the bolts -2- and -3-.



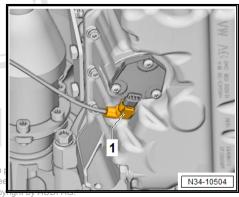
Remove the bolts -1- from the cable bracket.



NOTICE

Risk of damaging the operating cable by deforming it.

- Never bend the operating cable too sharply or kink it.
- Remove the lock washer -3- -arrow- and remove the selector lever cable from the transmission.
- Disconnect the connector -1- from the Oil Level Thermal Sensor -G266-.

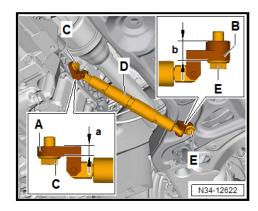


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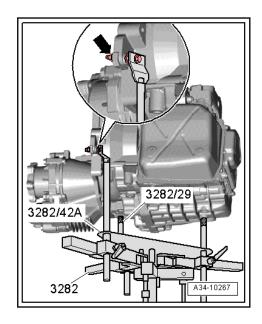
- Removal all engine/transmission connecting bolts from the transmission except for an easily accessible bolt.
- Install the Engine Support -T10533/1- -D- as follows:



- Secure the Engine Support -D- with the flat side -A- with a M10 x 20 bolt -C- on the left threaded hole of the heat shield on the engine support.
- On the subframe the Engine Support -D- is secured on the higher side -B- with a M 8 x 30 bolt -E-on the right threaded hole for the noise insulation.

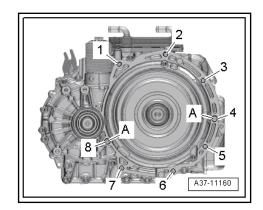
Push the engine/transmission as far forward as possible by turning the spindle for the Engine Support -D-. Avoid bumping the fan shroud with other components.

The Transmission Support -3282- is set up with the Transmission Support - Mounting Plate 42A -3282/42 A- to remove the dual clutch transmission 0D9.



- Place the Transmission Support -3282- on the Engine and Gearbox Jack -VAS 6931-.
- Align the transmission support arms so that they match up with the holes in the Transmission Support - Mounting Plate 42A -3282/42 A-.
- Install the support elements as shown on the Transmission Support - Mounting Plate 42A -3282/42A- The "retaining plate with hole" is used as a front support element.
- Place the Engine and Gearbox Jack -VAS 6931- under the vehicle.
- The arrow symbol on the mounting plate points in the direction of travel.
- Align the Transmission Support -3282- so that it is parallel to the transmission.
- Install the Transmission Support Pins 29 -3282/29- in the transmission.
- Attach the "retaining plate with hole" securely to the transmission as shown -arrow-.
- Insert the last support element into the transmission as shown.
- Support the transmission from underneath using the Engine and Gearbox Jack -VAS 6931-.
- Remove the remaining bolts for the transmission/engine connection.

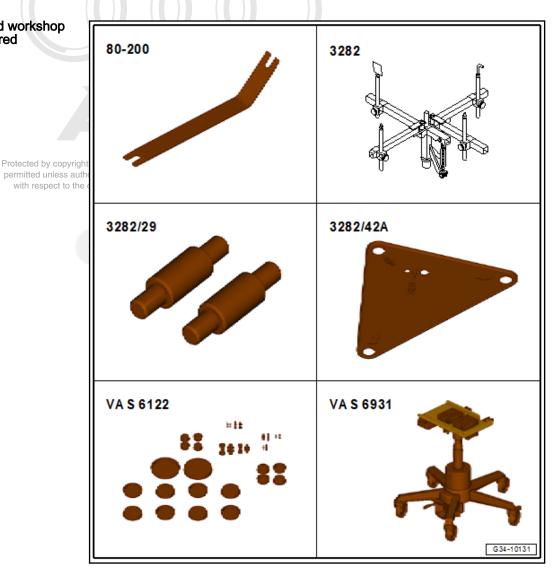
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- Remove the transmission from the engine, while being careful of selector lever cable«. Slightly tip the transmission outward over the Transmission Support -3282- spindle.
- Lower the transmission carefully using the Engine and Gearbox Jack -VAS 6931-.
- When lowering, change the transmission position using the spindles on the Transmission Support -3282-.

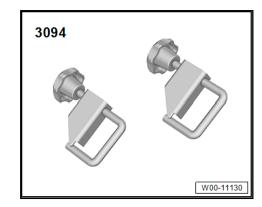
Transmission, Removing, Audi Q3 2.2.3

Special tools and workshop equipment required



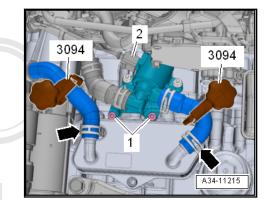
- Pry Lever -80-200-
- Transmission Support -3282-
- Transmission Support Pins 29 -3282/29-
- Transmission Support Mounting Plate 42A -3282/42A-
- Engine Bung Set -VAS 6122-
- Engine and Gearbox Jack -VAS 6931-
- Hose Clamps Up To 25 mm -3094-

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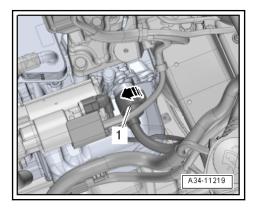


Procedure

- Pay attention to the general information. Refer to ⇒ I3.1 nformation", page 5
- Follow the guidelines for clean working conditions. Refer to ⇒ f3.3 or Clean Working Conditions", page 6.
- Pay attention to the general repair information. Refer to ≥ R3.4 epair Information", page 7
- Bring all cable ties back to the same positions during instal-
- Move the selector lever into "P" position.
- Engage the parking brake.
- Switch the ignition off.
- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Remove the air filter housing. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Remove the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm -3094-.



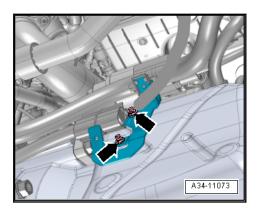
- Place a cloth underneath to catch any leaking coolant.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission little cooled a G. AUDI AG does not guarantee or accept any liability ses, in part or in whole, is not
- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS 6122-.
- If equipped, remove the bolts -1- and move the Transmission Coolant Valve -N488- to the side.
- Disconnect the connector -2-, if equipped.



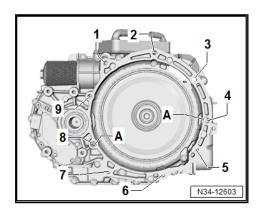


Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Turn the twist lock counter-clockwise -arrow- to disconnect the connector -1- for the Dual-Clutch Transmission Mechatronic -J743-.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Remove the nuts -arrows- and remove the front bracket from the transmission fluid pan.



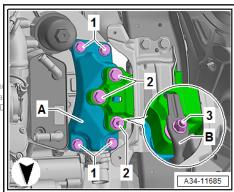
Remove all of the bolts for the transmission/engine connection that are accessible from above.



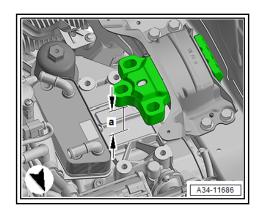
- The screw -3- is located in the opening for the starter.
- Remove the subframe without the steering gear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe without Steering Gear, Removing and Installing.
- Support the engine in the installation position. Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Engine, Supporting in Installation Position.
- If equipped, loosen the nut -3- and remove the ground wire -B-.



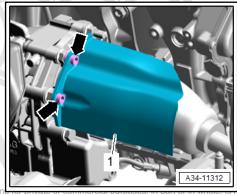
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- Remove the bolts -1 and 2- and remove the transmission support -A-.
- Lower the engine/transmission assembly using the Engine Support Bridge - Spindle -10 - 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.

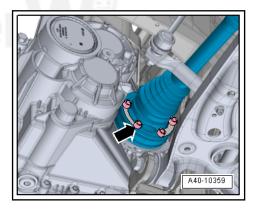


- Dimension -a- = maximum 65 mm.
- Remove the nuts -arrows- and remove the right drive axle heat shield. (different versions)

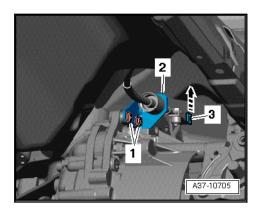


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Remove the left and right drive axle -arrow- from the transme correctness of information in this document. Copyright by AUDI AG. mission. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.



- Tie up the drive axles to the rear.
- Make sure that the drive axle protective coating is not damaged.
- Remove the bolts -1- from the cable bracket.



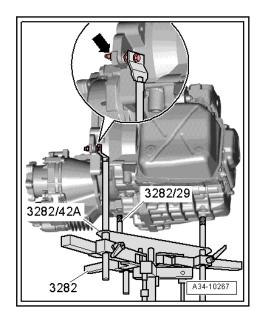
NOTICE

Risk of damaging the operating cable by deforming it.

- Never bend the operating cable too sharply or kink it.
- Remove the lock washer -3- -arrow- and remove the selector lever cable from the transmission.

The Transmission Support -3282- is set up with the Transmission Support - Mounting Plate 42A -3282/42 A- to remove the dual clutch transmission 0D9.

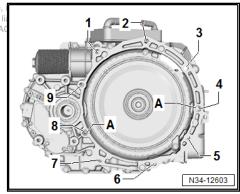
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- Place the Transmission Support -3282- on the Engine and Gearbox Jack -VAS 6931-.
- Align the transmission support arms so that they match up with the holes in the Transmission Support - Mounting Plate 42A -3282/42 A-.
- Install the support elements as shown on the Transmission Support - Mounting Plate 42A -3282/42A- The "retaining plate with hole" is used as a front support element.
- Place the Engine and Gearbox Jack -VAS 6931- under the vehicle.
- The arrow symbol on the mounting plate points in the direc-
- Align the Transmission Support -3282- so that it is parallel to the transmission.

- Install the Transmission Support Pins 29 -3282/29- in the transmission.
- Attach the "retaining plate with hole" securely to the transmission as shown -arrow-.
- Insert the last support element into the transmission as shown.
- Support the transmission from underneath using the Engine and Gearbox Jack -VAS 6931-.
- Remove the remaining bolts for the transmission/engine connection.

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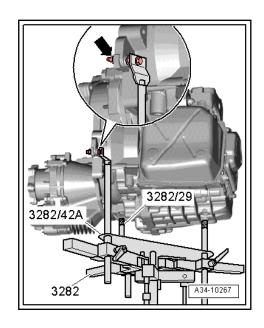
- Remove the transmission from the alignment sleeves.
- Remove the transmission from the engine.
- Lower the transmission carefully using the Engine and Gearbox Jack -VAS 6931-.
- When lowering, change the transmission position using the spindles on the Transmission Support -3282-.

2.3 Transmission, Installing

- Replace the bolts that were tightened with an additional turn.
- Replace the self-locking nuts and bolts as well as gaskets, seals and O-rings.
- Secure all hose connections with hose clamps that match those used in production. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Bring all cable ties back to the same positions during installation.

Procedure

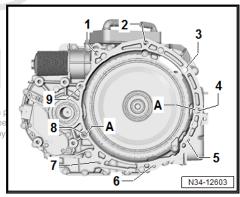
Mount the transmission on the Transmission Support -3282and secure it.



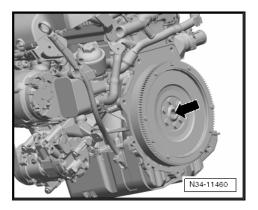
- Clean the input shaft splines and the hub, remove any corrosion and apply only a very thin coating of lubricant on the splines. Refer to the ⇒ Electronic Parts Catalog (ETKA). Remove any excess grease.
- Check if the alignment sleeves -A- for centering the engine and transmission are in the cylinder block and insert them if they are not.



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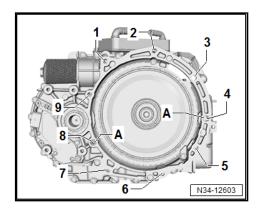


Replace the needle bearing -arrow- in the crankshaft. Refer to ⇒ Rep. Gr. 13; Crankshaft; Needle Bearing in Crankshaft, Replacing.



If this needle bearing in the crankshaft is damaged, the gears are no longer able to shift correctly because the clutch is supported at this bearing.

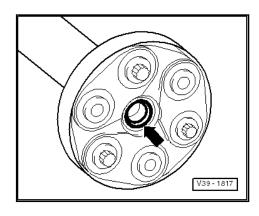
- Carefully lift the transmission using the Engine and Gearbox Jack -VAS 6931- and bring it to its installation position using the Transmission Support -3282-.
- Insert the transmission without pinching any lines.
- Attach the transmission to the engine.



- The bolt -3- is only accessible via the opening for the removed starter.
- The bolt -9- is only present on the 1.4L TFSI engines.
- Audi A3, Q2, TT: Adjust the assembly mounts. Refer to ⇒ Rep. Gr. 10; Subframe Mount; Assembly Mount, Adjust-
- Remove the Transmission Support -3282- from the transmis-
- Remove the Engine Support Bridge -10-222A- from the engine.



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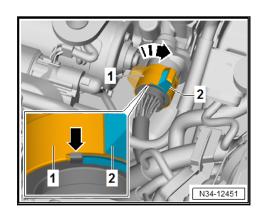


Leaks due to damaged seal.

- Introduce the pin of the bevel box carefully in the flange for the driveshaft.
- Push the engine/transmission assembly toward the plenum chamber bulkhead while carefully guiding the bevel box pins into the driveshaft flange.

6-Speed Dual Clutch Transmission 0D9 - Edition 03.2023

Tip:



- Some vehicle connectors for the Mechatronic are equipped with a clip which holds the connector in the end position after locking. When loosing the connector the bracket from the clip can break. If the bracket from the clip is broken, the clip must be replaced.
- Replace the clip on the vehicle connector if equipped. Refer to ⇒ o7.4 n Vehicle Connector, Replacing", page 115.
- Connect the connector -1- to the Mechatronic and turn it all the way to lock it in place. On connectors with clip the bracket of the clip -2- must engage behind the hook from the connector -arrow-.
- AWD vehicles: Install the driveshaft. Refer to ⇒ Rep. Gr. 39: Driveshaft it controls. Covering the proving and installing guarantee or accept any liability
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 Tighten the bolts for the bevel box bracket. Refer to

 ■

 1. Povel Day" -6.1 Bevel Box", page 95
- Install the drive axles. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and
- Audi A3, Q2, TT: Install the subframe. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe without Steering Gear, Removing and Installing.
- Install the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Audi A3, Q2, and Q3: Install the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.
- Install the air filter housing:
- TDI. Refer to ⇒ Engine; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.
- TFSI. Refer to ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Fill with coolant. Refer to ⇒ Rep. Gr. 19; Cooling System/Coolant; Coolant, Draining and Filling.
- Install the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.

If the transmission is replaced, the "Replace control module" function must be performed using the > Vehicle diagnostic test-

Select Individual test on the ⇒ Vehicle diagnostic tester.

DSG transmission 0D9

- 01 OBD-capable systems
- 02 Transmission electronics
- 02 Transmission electronics functions
- 02 Mechatronic, replacing
- Follow the instructions on the display.

Tightening Specifications

- Refer to ⇒ -5.1 Assembly Mounts", page 94
- Refer to ⇒ -1.2 Shift Mechanism", page 31
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Overview - Drive Axle.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.
- Refer to ⇒ Rep. Gr. 21; Charge Air System; Overview -Charge Air Hose Connections.
- Refer to ⇒ Rep. Gr. 19; Coolant Pump/Coolant Regulation, Overview Electric Coolant Pump.
- Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Overview - Starter.



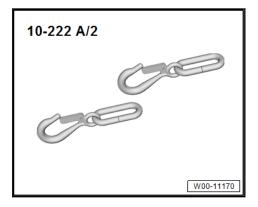
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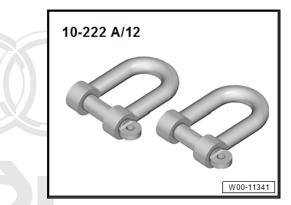
3 Transmission, Transporting

Special tools and workshop equipment required

◆ Engine Support Bridge - Additional Hooks -10-222A/2-



Engine/Gearbox Support Shackle -10-222A/12-

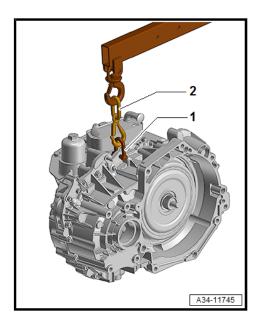


Shop Crane -VAS 6100-

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Procedure



- Secure the Engine Support Bridge Shackle (2 pc.) 10-222A/12- to the transmission lifting eye.
- Attach the Shop Crane VAS 6100- to the Engine Support Bridge Additional Hooks -10-222A/2-.



Risk of damaging the transmission fluid cooler.

- Guide the transmission when transporting.



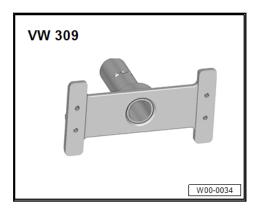
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Securing on Engine and Transmis-4 sion Holder

Special tools and workshop equipment required

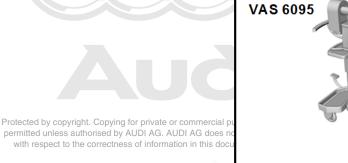
♦ Holding Plate -VW 309A-



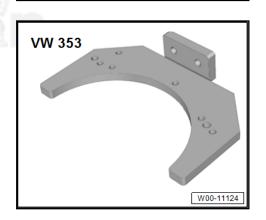
Holding Fixture -VW 313- or



Engine and Gearbox Bracket -VAS 6095A-

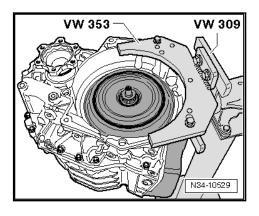


Transmission Support -VW 353-



W00-11310

Secure the transmission to the Transmission Support -VW 353- and insert it with the Holding Plate -VW 309A- into the Holding Fixture -VW 313- or the Engine and Gearbox Bracket -VAS 6095A-.





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5 Assembly Mounts

⇒ -5.1 Assembly Mounts", page 94

5.1 Overview - Assembly Mounts

1 through 6 - Engine Mount

Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Overview -Assembly Mounts.

7 - Pendulum Support

□ Removing and Installing. Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Pendulum Support, Removing and Installing.

8 - Bolt

- Replace after removing
- ☐ 130 Nm +90°

9 - Bolt

- □ Replace after removing
- □ 50 Nm +90°

10 - Bolt

- Replace after removing
- □ 50 Nm +90°

11 - Bolt

- Replace after removing
- □ 60 Nm +90°

12 - Bolt

- Replace after removing
- □ 50 Nm +90°

13 - Transmission Mount

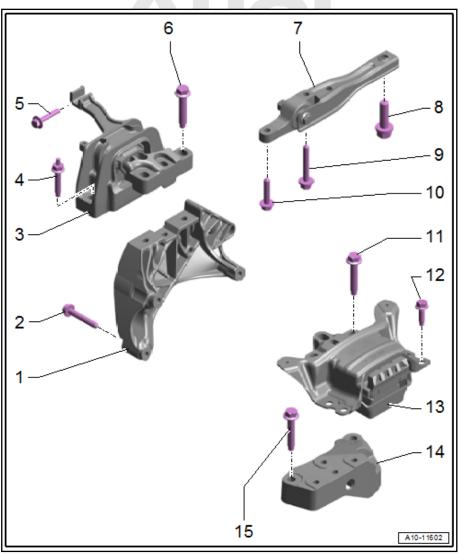
- With support arm
- Removing and Installing. Refer to ⇒ Rep.

Gr. 10; Assembly Mounts; Overview - Assembly Mounts.

14 - Transmission Support

15 - Bolt

- □ Replace after removing
- ☐ 40 Nm +90°





6 **Bevel Box**

- ⇒ -6.1 Bevel Box", page 95
- ⇒ B6.2 ox, Removing", page 96
- ⇒ B6.3 ox, Installing", page 102
- ⇒ B6.4 ox, Tightening Specification", page 102

6.1 Overview - Bevel Box

1 - Bolt

Tightening Specification. Refer to ⇒ Item 3 (page 145)

2 - Heat Shield

For drive axle

3 - Bolt

Tightening Specification. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.

4 - Bolt

Tightening specification. Refer to \Rightarrow Rep. Gr. 39; Driveshaft; Overview - Driveshaft.

5 - Heat Shield

For driveshaft

6 - Bolt

Tightening specification. Refer to ⇒ Rep. Gr. 39; Driveshaft; Overview - Driveshaft.

7 - Bevel Box

- Removing. Refer to ≥ B6.2 ox, Removing", <u>page 96</u>.
- Installing. Refer to ⇒ B6.3 ox, Installing", <u>page 102</u> .

8 - Bolt

- Replace after removing
- ☐ Tightening Specification. Refer to ⇒ B6.4 ox, Tightening Specification", page 102.

9 - Bracket

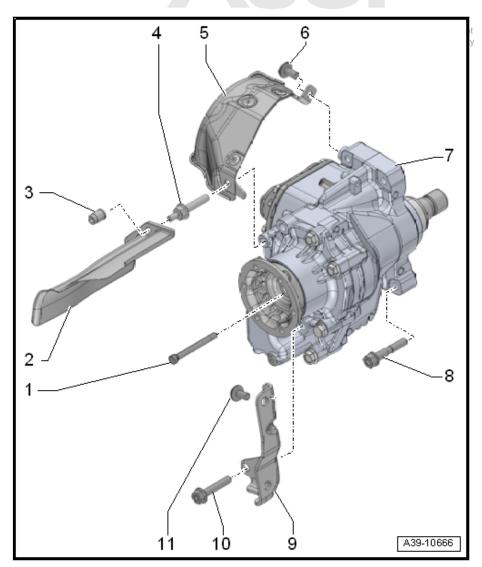
- ☐ For bevel box
- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct allocation.

10 - Bolt

☐ Tightening specification and sequence. Refer to ⇒ B6.4 ox, Tightening Specification", page 102.

11 - Bolt

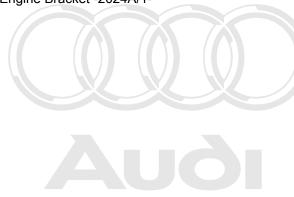
☐ Tightening specification and sequence. Refer to ⇒ B6.4 ox, Tightening Specification", page 102.

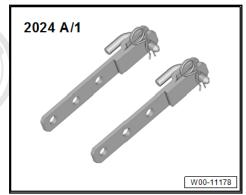


6.2 Bevel Box, Removing

Special tools and workshop equipment required

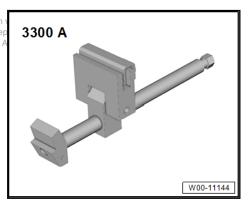
◆ Engine Sling - Engine Bracket -2024A/1-



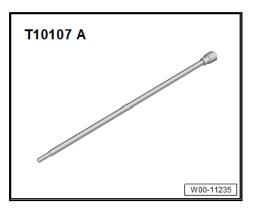


Engine Support Device -3300 Apermitted unless authorised by AUDI AG. AUDI AG does not guarantee or acce with respect to the correctness of information in this document. Copyright by



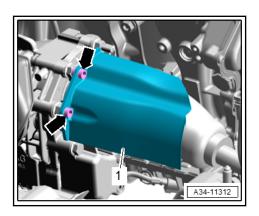


Socket and Extended Bit -T10107A-

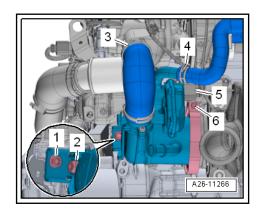


Procedure

- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Remove the pendulum support. Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Pendulum Support, Removing and Instal-
- Remove the fan shroud. Refer to ⇒ Rep. Gr. 19; Radiator and Radiator Fan; Fan Shroud, Removing and Installing.
- Remove the nuts -arrows- and remove the right drive axle heat shield.



Vehicles with TDI engine:

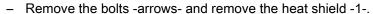


Remove the EGR cooler. Refer to ⇒ Rep. Gr. 26; EGR; EGR Cooler, Removing and Installing.

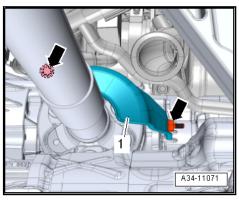
All Vehicles:

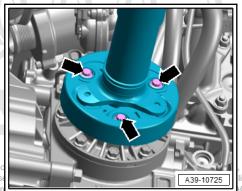


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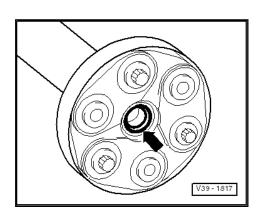
Label the position of the flexible disc and the bevel box flange facing each other for reinstallation.





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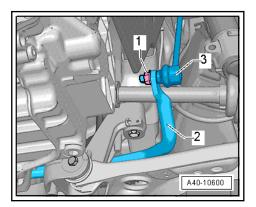
- Remove the driveshaft from the bevel box -arrows- by counterholding at the triangular flange using a lever.
- Push the engine/transmission assembly forward slightly (toward the front end) and remove the driveshaft from the bevel box.



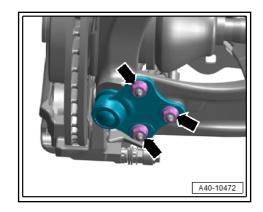
! NOTICE

Leaks due to damaged seal.

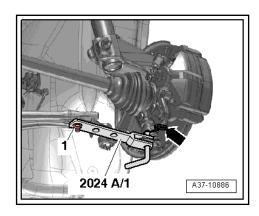
- Push the driveshaft horizontally toward the rear.
- If the seal is damaged, the driveshaft must be replaced.
- Remove the nut -1- for the right coupling rod -3- from the stabilizer bar -2-.



Using a felt-tip pen, mark the installation position of the right ball joint on the nuts -arrows-.



- Remove the nuts.
- Remove the right control arm from the ball joint.
- During the assembly work, make sure that the ball joint rubber boot does not get damaged. If necessary, protect the ball joint rubber boot from damage.
- Remove the right drive axle from the bevel box. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.
- Tie up the drive axle.
- Make sure that the drive axle protective coating is not damaged.
- Pivot the right suspension strut outward and support it with the Engine Sling - Engine Bracket -2024 A /1- as shown.



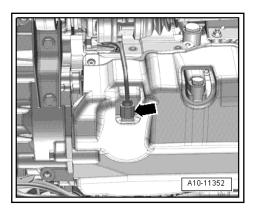
NOTICE

Risk of accident due to loose support parts.

- Secure the pin and ball joint with the securing pin -arrowand nut -1-.
- Disconnect the connector -arrow- from the Oil Level Thermal Sensor -G266-.

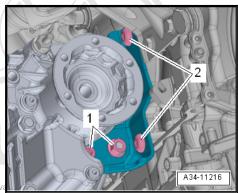
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There are different versions depending on the engine.

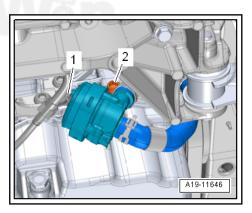
Vehicles with a TFSI engine:



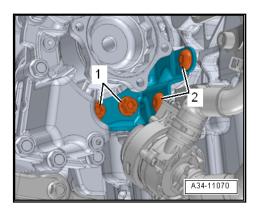
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Remove the bolts -1 and 2- and remove the box brackes of information in this document. Copyright by AUDI AG.

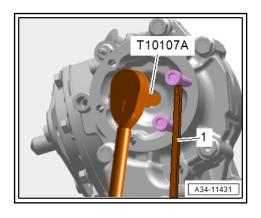
Vehicles with TDI engine:



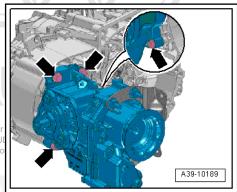
- Disconnect the connector -1-.
- Remove the bolt -arrow- and push the Heater Support Pump -V488- to the right.
- Remove the bolts -1 and 2- and remove the bevel box brack-



All Vehicles:

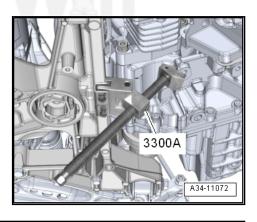


- Remove the right flange shaft bolt using the Socket and Extended Bit -T10107A- by installing two bolts in the flange and counterholding the flange shaft with an assembly lever.
- Remove the bolts -arrows- that connect the bevel box to the S tronic dual clutch transmission.



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- Fasten the Engine Support Device -3300A- to the subframe.



- Place the spindle from the Engine Support Device -3300Aon the transmission as shown.
- Using the spindle from the Engine Support Device -3300 A-, only push the engine/transmission assembly so far forward until the bevel box can be removed.
- Do not push the engine/transmission assembly too far forward, to not damage the fan shroud.
- Carefully press the bevel box off of the S tronic dual clutch transmission while securing it from falling.
- Remove the bevel box together with the right flange shaft.

6.3 Bevel Box, Installing

Procedure

Install in the reverse order of removal while noting the following:

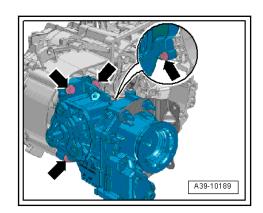
- Place the bevel box with the right flange shaft on the transmission while turning the flange shaft at the same time.
- Tighten the bevel box on the transmission.
- Install the fan shroud. Refer to ⇒ Rep. Gr. 19; Radiator/Radiator Fan; Fan Shroud, Removing and Installing.
- Gear Oil, Checking Level. Refer to ⇒ O5.2 il, Checking Level", page 173.

Tightening Specifications

- Refer to \Rightarrow -6.1 Bevel Box", page 95
- Refer to ⇒ B6.4 ox, Tightening Specification", page 102
- Refer to \Rightarrow -3.1 Differential", page 145
- Refer to ⇒ Rep. Gr. 10; Assembly Mounts; Overview Assembly Mounts.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle: Overview - Drive Axle.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.
- Refer to \Rightarrow Suspension, Wheels b Steering Repfo Giverov roomercial purposes, in part or in whole, is not or control Arm. Ball, Joint Political riches a provided phase the phas er Control Arm, Ball Joint; Overview of the overliness at interior and the state of acceptance of ac Ball Joint.
- Refer to ⇒ Rep. Gr. 39; Driveshaft; Overview Driveshaft.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

Bevel Box, Tightening Specification 6.4

Bevel box to dual clutch transmission



- Replace the bolts after removing them.
- Tighten the bolts in steps as follows:

Step	Bolts	Tightening Specification/Additional Turn
1.	-arrows-	Install all the way by hand
2.	-arrows-	40 Nm diagonally
3.	-arrows-	90° additional turn, diagonally

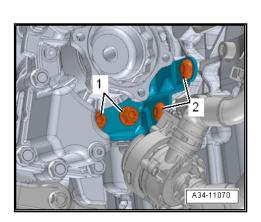
Bracket for bevel box - vehicles with TFSI engine



Step	Bolts	Tightening Specification
1.	-1-	Install all the way by hand
2.	-2-	40 Nm
3.	-1-	40 Nm







Tighten the bolts in steps as follows:



A34-11216

Step	Bolts	Tightening Specification
1.	-1-	Install all the way by hand
2.	-2-	40 Nm
3.	-1-	40 Nm



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7 Mechatronic

- ⇒ -7.1 Mechatronic", page 105
- ⇒ F7.2 luid Pan, Removing and Installing", page 108
- ⇒ R7.3 emoving and Installing", page 111
- ⇒ o7.4 n Vehicle Connector, Replacing", page 115
- ⇒ F7.5 luid Pump, Removing and Installing", page 116

7.1 Overview - Mechatronic



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1 - Drain and Check Plug

□ 45 Nm

2 - Seal

□ Replace after removing

3 - Overflow Pipe

□ 3 Nm

4 - Bolt

- Quantity: 10
- □ Replace after removing
- □ Tightening specification and sequence. Referd unle to ⇒ Fig. ""Tightening Specification and Se quence for Dual-Clutch Transmission Mechatronic -J743- "", page 107

5 - Transmission Fluid Pan

□ Removing and Installing. Refer to ⇒ F7.2 luid Pan, Removing and Installing", page 108

6 - Bolt

- Quantity: 5
- Replace after removing
- ☐ Tightening specification and sequence. Refer to ⇒ Fig. ""Tightening Specification and Tightening Sequence for <u>Iransmission Fluid Pan</u> ", page 107 . -A-.

10 8 13 A34-11158 15 14

7 - Seal

Replace after removing

8 - Dual-Clutch Transmission Mechatronic -J743-

- With O-rings on connector
- □ Replace the O-rings after removal
- □ Removing and Installing. Refer to ⇒ R7.3 emoving and Installing", page 111.

9 - Bleed Cap

Placed on bleed pipe

10 - Bleed Pipe

- Pressed into transmission
- Replace after removing

11 - Transmission Fluid Pump

- □ Removing and Installing. Refer to ⇒ F7.5 luid Pump, Removing and Installing", page 116.
- □ Attach with new gasket

12 - Transmission Fluid Pump Cover

- With seal
- □ Replace after removing
- Removing and Installing. Refer to ⇒ F7.5 luid Pump, Removing and Installing", page 116.

13 - Bolt

- Quantity: 6
- □ Replace after removing
- ☐ Tightening specification and sequence. Refer to ⇒ Fig. ""Tightening Specification and Sequence for Transmission Fluid Pump Cover -A-."", page 108

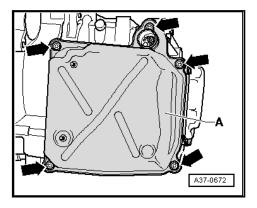
14 - Bolt

- Quantity: 4
- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct allocation.
- □ Replace after removing
- Tightening specification and sequence. Refer to ⇒ Fig. ""Tightening Specification and Sequence for <u>Transmission Fluid Pump"", page 108</u>

15 - Seal

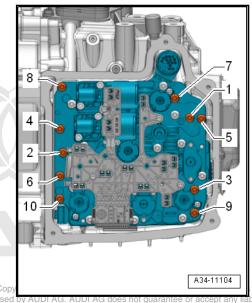
□ Replace after removing

Tightening Specification and Tightening Sequence for Transmission Fluid Pan -A-.



- Tighten the bolts -arrows- diagonally in steps to 16 Nm.

Tightening Specification and Sequence for Dual-Clutch Transmission Mechatronic -J743-



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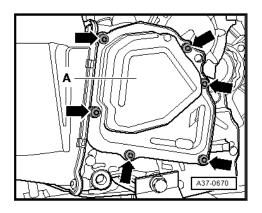
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- Replace the bolts.
- Tighten the bolts in the steps in the sequence shown:

ιδυΑ

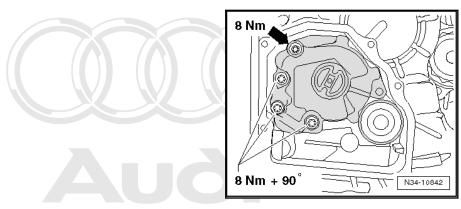
Step	Bolts	Tightening Specification/Additional Turn
1.	-1 to 10-	5 Nm
2.	-1 to 10-	90° additional turn

Tightening Specification and Sequence for Transmission Fluid Pump Cover -A-.



- Replace the bolts.
- Tighten the bolts -arrows- diagonally in increments to 8 Nm.

Tightening Specification and Sequence for Transmission Fluid



- Replace the bolts.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not
- Tighten the bolts in steps as Tölliows: a authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

Step	Bolts	Tightening Specification/Additional Turn
1.	Upper Counter- sunk Bolt	8 Nm with Wrench - Pump/Injector Long Reach -T10054-
2.	Flat Head Bolts	8 Nm
3.	Flat Head Bolts	90° additional turn

7.2 Transmission Fluid Pan, Removing and Installing

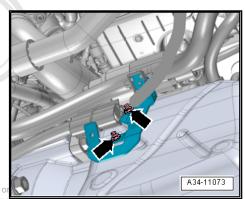
Special tools and workshop equipment required

◆ Used Oil Collection and Extraction Unit -SMN372500-



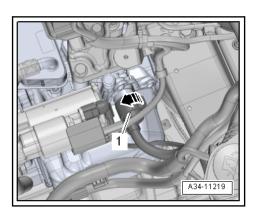
Removing

- Remove the air filter housing:
- TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- TDI. Refer to \Rightarrow Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.
- Drain the transmission fluid. Refer to <u>⇒ F9.3 luid</u>, <u>Draining</u> and Filling", page 132.
- Remove the nuts -arrows- and remove the front bracket from the transmission fluid pan.



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Turn the twist lock counter-clockwise -arrow- to disconnect the counter-clockwise -arrow- to disconnect the connector -1- for the Dual-Clutch Transmission Mechatronic -J743-.





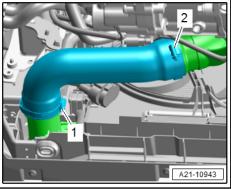
Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.

Vehicles with 1.8L/2.0L TFSI Engine:

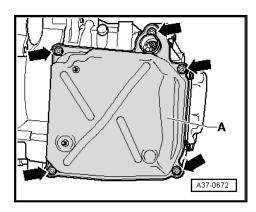


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If installed, loosen the hose clamps -1 and 2- and remove the air duct hose.

All Vehicles:

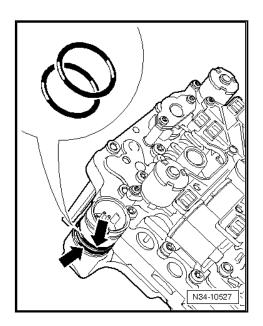


- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.
- Loosen the bolts -arrows- diagonally.
- Remove the transmission fluid pan -A- with the transmission fluid pan gasket. While doing so, allow the transmission fluid remaining in the transmission fluid pan to drain into the Used Oil Collection and Extraction Unit -SMN372500-.

Installing

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Install in the reverse order of removal while noting the following:

- Replace the transmission fluid pan gasket and bolts.
- Replace the O-rings -arrows- on the connector for the Dual-Clutch Transmission Mechatronic -J743-.
- Remove any oil or grease from the sealing surfaces.
- Coat the O-rings on the connector for the Dual-Clutch Transmission Mechatronic -J743- with transmission fluid.
- Install the transmission fluid pan -A- with the transmission fluid pan gasket and tighten. Refer to ⇒ Fig. ""Tightening Specification and Tightening Sequence for Transmission Fluid Pan -A-."", page 107.
- Fill the transmission fluid (refer to ⇒ F9.3 luid, Draining and Filling", page 132) and check the transmission fluid level (refer to ⇒ F9.2 luid Level, Checking", page 128).

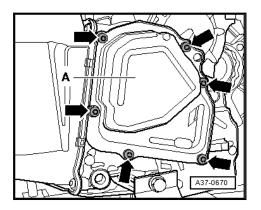
Tightening Specifications

- Refer to ⇒ Fig. ""Tightening Specification and Tightening Sequence for Transmission Fluid Pan -A-."", page 107
- Refer to ⇒ Rep. Gr. 24; Air Filter; Overview Air Filter Housing.

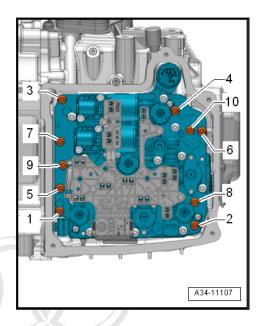
7.3 Mechatronic, Removing and Installing

Removing

- Remove the transmission fluid pan. Refer to ⇒ F7.2 luid Pan, Removing and Installing", page 108
- Remove the left front wheel housing liner. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Remove the bolts -arrows- and remove the transmission fluid pump cover -A-.

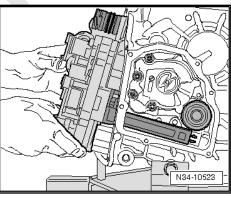


Loosen and remove the bolts in the following sequence: -1 to 10-.



Carefully pull the Mechatronic out of the transmission housing until the long »sensor arm« is no longer in the transmission housing.



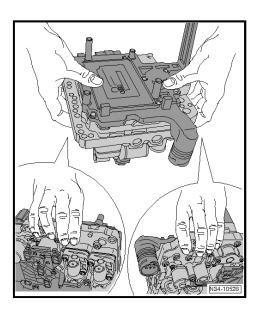


NOTICE

Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Carefully pivot the Mechatronic downward.

- Make sure that the locking tabs on the »sensor arm« do not break off.
- Store the Mechatronic properly.





Risk of damaging the Mechatronic.

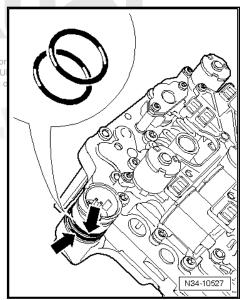
- Do not lift the Mechatronic by the »sensor arm« or set it down on the arm.
- If the »sensor arm« is damaged, the Mechatronic must be replaced.

Installing

Install in the reverse order of removal while noting the following:

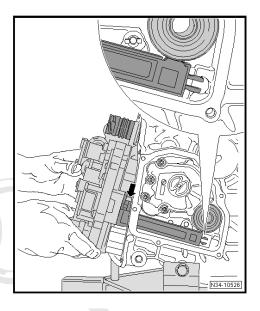
Replace the bolts.



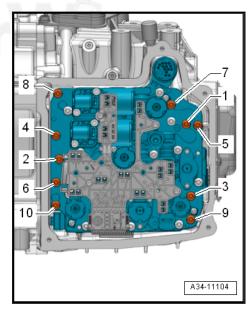


- Replace the transmission fluid pump cover.
- Replace the O-rings -arrows- on the connector for the Dual-Clutch Transmission Mechatronic -J743-.

Carefully insert the Dual-Clutch Transmission Mechatronic -J743- into the transmission housing:



- The Mechatronic must be placed on the alignment pins -arrow-.
- The »sensor arm« must rest in the guide on the transmission housing as shown in the magnified area.
- Tighten the bolts for the Dual-Clutch Transmission Mecha-Copying for private or commercial purposes, in part or in whole, is not tronic -J743-. Refer to ⇒ Fig. ""Tightening Specification authorised by AUDI AG. AUDI AG does not guarantee or accept any liability and Sequence for Dual-Clutch Transmission Mechatronic or rectness of information in this document. Copyright by AUDI AG. J743-"", page 107



- Install the transmission fluid pan. Refer to ⇒ F7.2 luid Pan, Removing and Installing", page 108
- Install the connector for the Dual-Clutch Transmission Mechatronic -J743- and lock the retainer by turning.
- Install the transmission fluid pump cover. Refer to ⇒ F7.5 luid Pump, Removing and Installing", page 116.
- Fill the transmission fluid (refer to ⇒ F9.3 luid, Draining and Filling", page 132) and check the transmission fluid level (refer to ⇒ F9.2 luid Level, Checking", page 128).



Basic Setting, Performing

Select Individual test on the ⇒ Vehicle diagnostic tester.

DSG transmission 0D9

- 01 OBD-capable systems
- 02 Transmission electronics
- 02 Transmission electronics functions
- 02 Mechatronic, replacing
- Follow the instructions on the display.

Tightening Specifications

- ◆ Refer to ⇒ -7.1 Mechatronic", page 105
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.

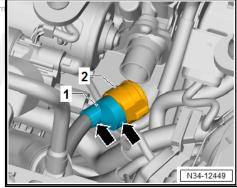
7.4 Clip on Vehicle Connector, Replacing

Some vehicle connectors for the Mechatronic are equipped with a clip which holds the connector in the end position after locking. When loosing the connector the bracket from the clip can break. If the bracket from the clip is broken, the clip must be replaced.

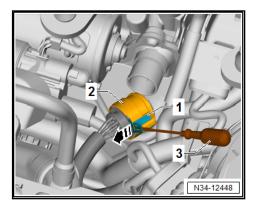
If equipped, remove the splash guard -1- from the connector -2- -arrows-.

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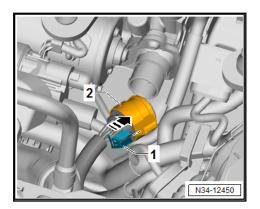
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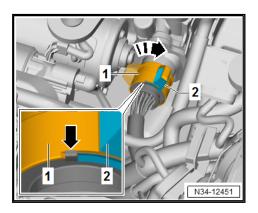
- There is not splash guard when a clip is installed.
- Pry out the clip -1- from the connector -2- using a screwdriver -3-.



Install the new clip -1- as shown, on the connector -2- and engage in the -direction of the arrow-.



- When correctly installed the clip contacts the connector and can no longer be moved back and forth.
- Place the vehicle connector -1- with the clip -2- on the mechatronic and lock by turning. At the same time the hook of the clip must engage behind the hook of the connector -arrow-.



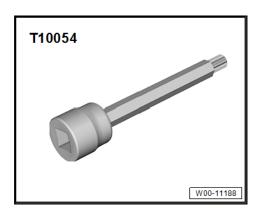
Transmission Fluid Pump, Removing 7.5 and Installing

Special tools and workshop equipment required

Wrench - Pump/Injector Long Reach -T10054-



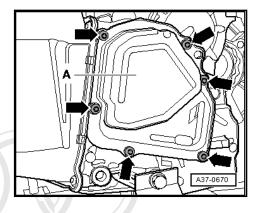
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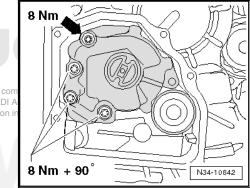
Removing

- Drain the transmission fluid (refer to ⇒ F9.3 luid, Draining and Filling", page 132) and leave the Used Oil Collection And Extraction Unit -SMN372500- underneath.
- Remove the left front wheel housing liner. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Remove the bolts -arrows- and remove the transmission fluid pump cover -A-. While doing so, allow the transmission

fluid still in the cover to drain into the Used Oil Collection And Extraction Unit -SMN372500-.



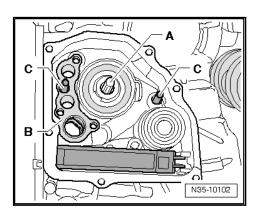
Remove the bolts by using the Wrench - Pump/Injector Long Reach -T10054- for the upper bolt -arrow-.



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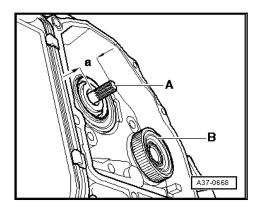
Remove the transmission fluid pump from the alignment pins and the input shaft.

Installing

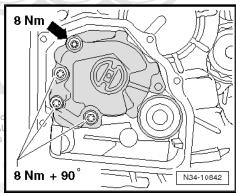


Install in the reverse order of removal while noting the following:

- Replace the bolts for the transmission fluid pump and for the transmission fluid pump cover.
- Replace the gasket -B- and cover for the transmission fluid pump.
- Check whether the alignment pins -C- are inserted in the transmission housing.
- Slide the transmission fluid pump input shaft -A- all the way into the transmission by turning the input shaft slightly.
- If the transmission fluid pump input shaft -A- is inserted correctly, the dimension -a- is approximately 23 mm.

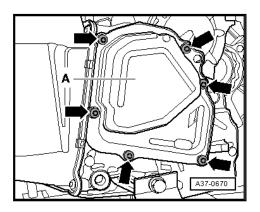


- If there are metal shavings on the sensor wheel -B-, remove them. The sensor wheel must not be demagnetized.
- Remove the paper gasket between the transmission fluid pump and the transmission.
- Remove the rest of the paper gasket and clean the inside of the transmission.
- Clean the sealing surfaces; they must be free from oil or grease.
- Insert a new paper gasket between the transmission fluid pump and the transmission. Mount with transmission fluid if necessary.
- Place the transmission fluid pump on the input shaft and tighten. Refer to ⇒ Fig. ""Tightening Specification and Sequence for Transmission Fluid Pump", page 108.



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Clean the sealing surface for the transmission fluid pump cover on the transmission housing.



Position the transmission fluid pump cover -A- and tighten. Refer to ⇒ Fig. ""Tightening Specification and Sequence for Transmission Fluid Pump Cover -A-."", page 108.



Fill the transmission fluid (refer to ⇒ F9.3 luid, Draining and Filling", page 132) and check the transmission fluid level (refer to ⇒ F9.2 luid Level, Checking", page 128).

Tightening Specifications

- Refer to ⇒ Fig. ""Tightening Specification and Sequence for Transmission Fluid Pump Cover -A-."", page 108
- Refer to \Rightarrow Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview Front Wheel Housing Liner.



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Transmission Fluid Circuit 8

- ⇒ -8.1 Transmission Fluid Circuit", page 120
- ⇒ F8.2 luid Cooler, Removing and Installing", page 120
- ⇒ F8.3 luid Filter, Removing and Installing", page 124

8.1 Overview - Transmission Fluid Circuit

1 - Transmission

2 - O-Rings

Replace after removing

3 - Bolt

- Replace after removing
- □ 20 Nm +45°

4 - Transmission Fluid Cooler

Removing and Instal-F8.2 luid Cooler, Removing and Installing", page 120 .

5 - Filter Housing

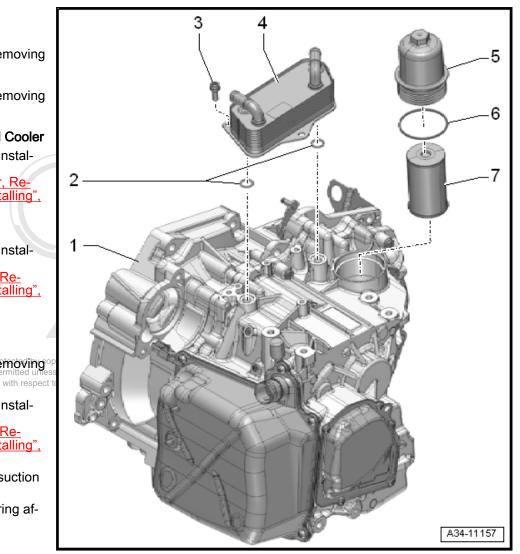
- □ Removing and Installing. Refer to ⇒ F8.3 luid Filter, Removing and Installing", page 124
- □ 30 Nm

6 - O-Ring

□ Replace after removing

7 - Filter Element

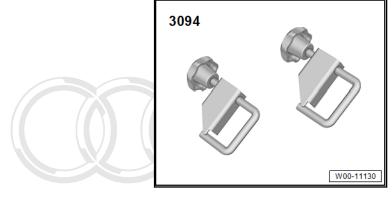
- □ Removing and Installing. Refer to F8.3 luid Filter, Removing and Installing", page 124.
- ☐ With O-ring on suction collar
- Replace the O-ring after removal



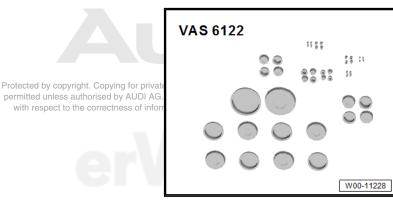
8.2 Transmission Fluid Cooler, Removing and Installing

Special tools and workshop equipment required

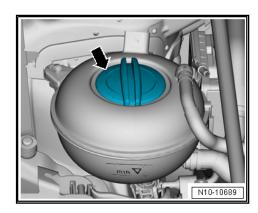
Hose Clamps - Up To 25 mm -3094-



♦ Engine Bung Set -VAS 6122-



Removing



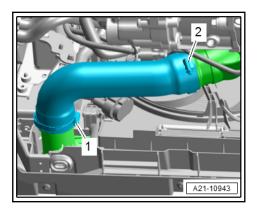
CAUTION

The cooling system is under pressure when the engine is warm. Risk of scalding due to hot steam and hot coolant. Burns to skin and other parts of the body are possible.

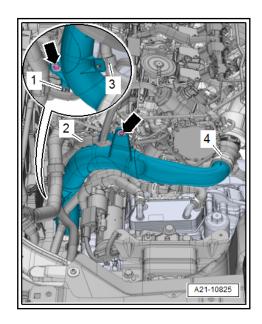
- Wear safety gloves.
- Wear protective eyewear.
- Reduce the pressure: cover the coolant reservoir cap with a cloth and carefully open.
- Open the coolant expansion tank cap -arrow-.
- Remove the air filter housing:
- TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.

Remove the noise insulation -1-. Refer to \Rightarrow Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.

Vehicles with 1.8L/2.0L TFSI Engine:

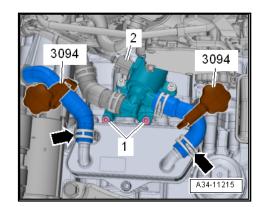


- If installed, loosen the hose clamp -1- and remove the air duct hose from the charge air cooler.
- Vehicles with left auxiliary radiator: free up the coolant hose -3-.



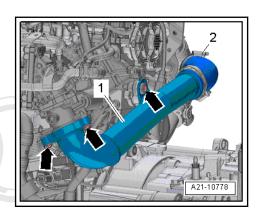


- Free up the wiring harnesses -1 and 2- at the air duct pipe.
- Loosen the screw-type clamp -4-.
- Remove the bolts -arrows-rand remove the aireduct pipe whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Vehicles with FFSI enginess of information in this document. Copyright by AUDI AG.
- Disconnect the connector -2-.



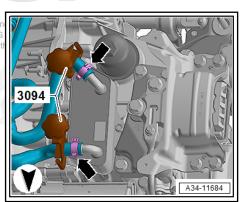
- Place a cloth underneath to catch any leaking coolant.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm -3094-.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission fluid cooler.
- Remove the bolts -1- and move the Transmission Coolant Valve -N488- to the side.

Vehicles with TDI engine:



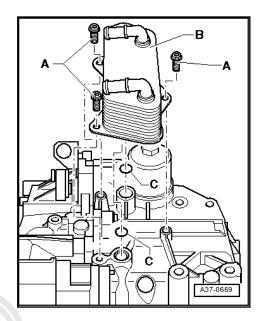
- Loosen the screw-type clamp -2- and bolts -arrows- and remove the air duct pipe -1-.
- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm -3094-.

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- Place a cloth underneath to catch any leaking coolant.

All Vehicles:



- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS 6122-.
- Remove the bolts -A-.



Transmission damage due to contaminated transmission fluid.

- Coolant must not drip into the transmission.
- Remove the transmission fluid cooler -B- with both O-rings -C- from the transmission.

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Install in the reverse order of removal while noting the following:

- Replace the transmission fluid cooler bolts.
- Replace the O-rings.
- Check the transmission fluid level. Refer to ⇒ F9.2 luid Level, Checking", page 128.
- Check the coolant level. Refer to ⇒ Rep. Gr. 19; Cooling System/Coolant; Coolant, Draining and Filling.

Tightening Specifications

- Refer to ⇒ -8.1 Transmission Fluid Circuit", page 120
- Refer to ⇒ Rep. Gr. 21; Charge Air System; Overview -Charge Air System.
- Refer to ⇒ Rep. Gr. 23; Air Filter; Overview Air Filter Housing or ⇒ Rep. Gr. 24; Air Filter; Overview - Air Filter Housing.

8.3 Transmission Fluid Filter, Removing and Installing

The transmission fluid filter must be replaced under the following conditions:

- The maintenance interval is reached. Refer to the ⇒ Maintenance Tables.
- Coolant is getting into the transmission fluid.



- Metal shavings were found in the transmission fluid.
- The clutch is burned or has a mechanical fault.

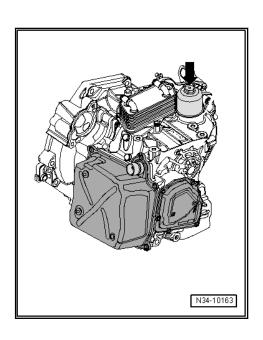
Removing

- Remove the air filter housing:
- TFSI. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- TDI. Refer to ⇒ Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing.

Audi A3, Q2, Q3:

Remove the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

All Vehicles:



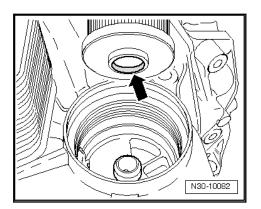
Tip:

- A residual amount of transmission fluid remains in the filter. This will drain out when removing the filter housing.
- Cover the area around the transmission fluid filter with some cloths before removing the filter housing.
- Loosen the filter housing -arrow- approximately seven turns.
- Wait approximately 10 seconds. This allows the fluid to flow from the filter housing back into the transmission.

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Install in the reverse order of removal while noting the following:

- Thoroughly clean any lubricated areas on the transmission.
- Insert the filter element with the suction collar -arrow- facing downward.



- Tighten the filter housing.
- Check the transmission fluid level. Refer to ⇒ F9.2 luid Level, Checking", page 128.

Tightening Specifications

- Refer to ⇒ -8.1 Transmission Fluid Circuit", page 120.
- Refer to \Rightarrow Rep. Gr. 24; Air Filter; Overview Air Filter Housing for TFSI or \Rightarrow Rep. Gr. 23; Air Filter; Overview Air Filter Housing for TDI.



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Transmission Fluid 9

- ⇒ f9.1 or Transmission Fluid Change", page 127
- ⇒ F9.2 luid Level, Checking", page 128
- ⇒ F9.3 luid, Draining and Filling", page 132

9.1 **Tools for Transmission Fluid Change**

Special tools and workshop equipment required

- ♦ Vehicle Diagnostic Tester
- ♦ Oil Filler -VAS 6262 A-



If necessary: Oil Filler - Adapter 6 -VAS 6262/6- or Oil Filler - Adapter -VAS 6262/7-



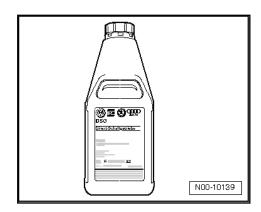
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◆ Used Oil Collection and Extraction Unit -SMN372500-



Original transmission fluid for the dual-clutch transmission 0D9 in the 1L container. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the part number.



- Protective Eyewear
- Acid-Resistant Safety Gloves

9.2 Transmission Fluid Level, Checking

Procedure

Special tools and workshop equipment required

Refer to ⇒ f9.1 or Transmission Fluid Change", page 127



CAUTION

Risk of injury due to the radiator fan turning on automatically.

Maintain distance to the fan when working near the radiator.

Test Conditions

- Do not start the engine if there is little or no transmission fluid in the transmission due to repair work or a severe loss of transmission fluid.
- In this case, prefill the transmission with transmission fluid.
- Transmission not in emergency operation mode. Copying for private or commercial purposes, in part or in whole, is not
- Move the vehicle onto a 4-column workshop holst of over a document. Copyright by AUDI AG. AUDI AG does not guarantee or accept any liability workshop holst of over a document. Copyright by AUDI AG. work pit so it is completely level.
- The selector level is in "P".
- The parking brake button is pressed to activate the electromechanical parking brake.
- Noise insulation removed. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Suction hose(s) of an exhaust extracting system that is switched on is/are connected.
- Engine running at idle.
- The A/C system and the heater are off.
- Vehicle Diagnostic Tester is connected ⇒ Vehicle diagnostic
- Transmission fluid temperature: 35 to 45 °C (95 to 113 °F).

Transmission Fluid Temperature, Reading:

The transmission fluid level changes with the transmission fluid temperature: too low of a transmission fluid temperature leads to overfilling, and too high of a transmission fluid temperature leads to underfilling.



- Both overfilling and underfilling impair the function of the transmission.
- Read the transmission fluid temperature using the ⇒ Vehicle diagnostic tester in Guided Functions, 02 - Read measured values, Transmission fluid temperature

Transmission Fluid Level, Checking

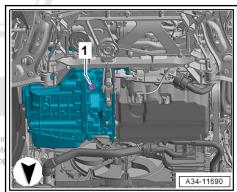
- Press the brake pedal and hold it down.
- With the brake pressed, shift through all selector lever positions "P, R, N, D/S" at idle, retaining each position for at least 3 seconds.
- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.



CAUTION

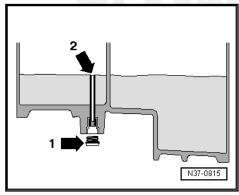
Risk of injury to the eyes and hands by escaping oil.

- Wear protective eyewear.
- Wear acid-resistant safety gloves.
- When a transmission fluid temperature of 35° C is reached, remove the drain and check plug -1-.



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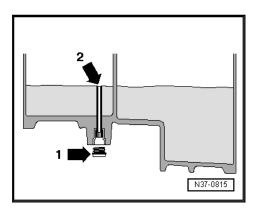
The collected transmission fluid runs out of the overflow pipe -arrow 2-.



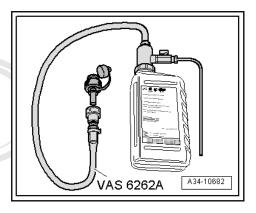
- Some transmission fluid will always leak out when opening the drain and check plug -arrow 1-, regardless of the transmission fluid level.
- Check if the overflow pipe is securely fastened in the transmission.
- Allow the excess transmission fluid to drain.
- If the overflow pipe is not secured correctly, the transmission fluid level cannot be properly determined.

- If some transmission fluid still leaks out at a transmission fluid temperature between 35 and 45 °C (95 and 113 °F) (due to additional warming), the transmission fluid level is ÖK.
- Every 30 seconds a small wave of fluid comes out of the overflow pipe, regardless of the height of the fluid level (cause: cooling fluid impulse to clutch.) This wave does not mean that the fluid level is sufficient and therefore must not be taken into account when determining the fluid level.
- Do not reuse transmission fluid that was drained.
- If the transmission fluid level is OK, perform the final procedures. Refer to ⇒ page 131.

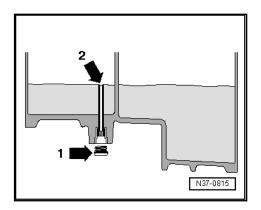
Transmission Fluid, Filling



- If no transmission fluid flows out at the opening for the drain and check plug -arrow 1- between 35 and 45 °C (95 and 113 °F), fill the transmission fluid as follows.
- Shake the container before opening.

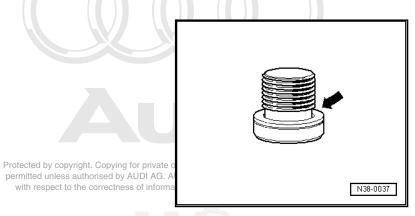


- Attach the transmission fluid container to the Oil Filler -VAS 6262 A-.
- Install the Oil Filler -VAS 6262 A- into the opening for the drain and check plugged arrow in hand-tight vate or commercial purposes, in part or in whole, is not drain and check plugged arrow and hand-tight vate or commercial purposes, in part or in whole, is not a purpose or acceptable to the commercial purposes, in part or in whole, is not a purpose or acceptable to the commercial purposes, in part or in whole, is not a purpose or acceptable to the commercial purposes, in part or in whole, is not a purpose or acceptable to the commercial purposes, in part or in whole, is not a purpose or acceptable to the commercial purposes. with respect to the correctness of information in this document. Copyright by AUDI AG.

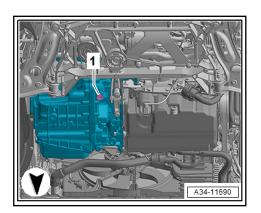


- Hold the container with the Oil Filler -VAS 6262 A- as high as possible over the transmission and fill the transmission with transmission fluid.
- To check if the transmission is sufficiently filled, disconnect the quick-release coupling on Oil Filler -VAS 6262 A- at regular intervals and seal the hose with a finger or a clean plug.
- The collected transmission fluid runs out of the overflow pipe -arrow 2-.
- Some transmission fluid always leaks out at the opening for the drain and check plug -arrow 1-, regardless of the transmission fluid level.
- Every 30 seconds a small wave of fluid comes out of the overflow pipe, regardless of the height of the fluid level (cause: cooling fluid impulse to clutch.) This wave does not mean that the fluid level is sufficient and therefore must not be taken into account when determining the fluid level.
- Do not reuse transmission fluid that was drained.
- If some transmission fluid still leaks out at a transmission fluid temperature between 35 and 45 °C (95 and 113 °F) (due to additional warming), the transmission fluid level is
- If the transmission fluid level is OK, perform the final procedures. Refer to <u>⇒ page 131</u>.

Final Procedures



- Remove the Oil Filler -VAS 6262A- from the transmission.
- Replace the seal -arrow- for the drain and check plug.
- Tighten the drain and check plug -1-.



Switch off the ignition and disconnect the diagnostic connector.

Tightening Specifications

◆ Refer to ⇒ -7.1 Mechatronic", page 105.

9.3 Transmission Fluid, Draining and Filling

Special tools and workshop equipment required

Refer to ⇒ f9.1 or Transmission Fluid Change", page 127

Procedure



CAUTION

Risk of injury due to the radiator fan turning on automatically.

Maintain distance to the fan when working near the radia-

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Selector lever in "P".

work pit so it is completely level.

- The parking brake button is pressed to activate the electromechanical parking brake.
- The engine is off.
- Noise insulation removed. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- The transmission fluid filter must always be replaced when changing the transmission fluid.

Transmission Fluid, Draining

- Replace the transmission fluid filter. Refer to ⇒ F8.3 luid Filter, Removing and Installing", page 124
- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.

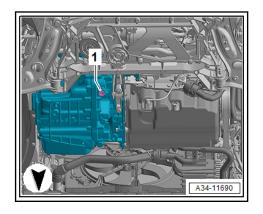


CAUTION

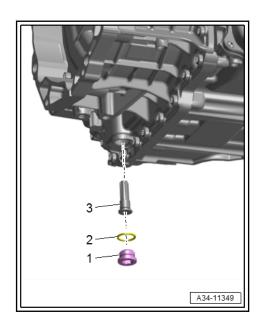
Risk of injury to the eyes and hands by escaping oil.

- Wear protective eyewear.
- Wear acid-resistant safety gloves.

Remove the drain and check plug -1-.



Remove the overflow pipe -3- from the drain and check plug hole.



- Drain any remaining transmission fluid.
- Reinstall the overflow pipe.

Transmission Fluid, Filling

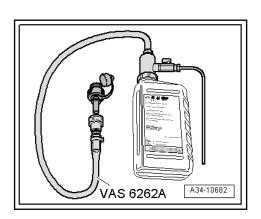


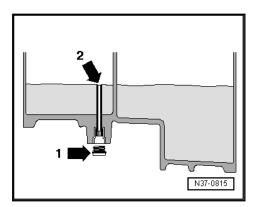
— Shake the container before opening.

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permitted unlast authorized by AUDI AGS AVOI A filling contraining to the Oil Filler -VAS with respect to the transmission filling contraining to the Oil Filler -VAS 6262 A-.

Install the Oil Filler -VAS 6262 A- into the opening for the drain and check plug -arrow 1- hand-tight.





- Hold the container with the Oil Filler -VAS 6262 A- as high as possible over the transmission and fill the transmission with approximately 5.2 liters of transmission fluid.
- Shift the selector lever into "P" and push the parking brake button to activate the electro-mechanical parking brake.
- Press the brake pedal and hold it down.
- Start the engine and let it run in idle.
- With the brake pressed, shift through all selector lever positions "P, R, N, D/S" at idle, retaining each position for at least 3 seconds.
- Move the selector lever into "P" position.
- Check the transmission fluid level. Refer to ⇒ F9.2 luid Level, Checking", page 128.

Tightening Specifications

Refer to ⇒ -7.1 Mechatronic", page 105



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Gears, Shafts

Gears and Shafts, Disassembling 1 and Assembling

No Repairs to Gears and Shafts at this Time



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Final Drive, Differential

- **Transmission Control**
- ⇒ L1.1 ocation Overview Transmission Control", page 136
- 1.1 Component Location Overview - Transmission Control

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1 - Brake Lamp Switch -F-/ Brake Pedal Switch -F63-

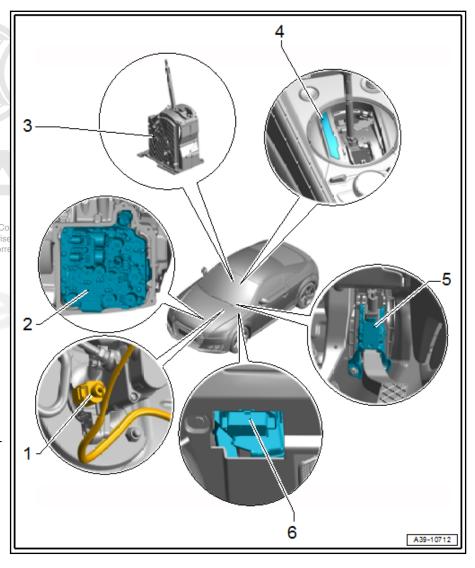
- On the brake master cylinder
- Component Location Overview. Refer to ⇒ Brake System; Rep. Gr. 45; Component Location Overview; Component Location Overview - ABS/ESP.

2 - Dual-Clutch Transmission Mechatronic -J743-

- Bolted to the front of the transmission hous. ing. with respect to the cor
- Removing and Installing. Refer to ⇒ R7.3 emoving and Installing", page 111

3 - Selector Lever -E313-

- With Selector Lever Sensor System Control Module -J587-, Shift Lock Solenoid -N110and Selector Lever Park Position Lock Switch -F319-
- ☐ The components are integrated in the selector mechanism circuit board and cannot be replaced separately.
- Shift Mechanism, Removing and Installing. Refer to ⇒ M1.6 echanism, Removing and Installing", page 46



4 - Selector Lever Transmission Range Position Display Unit -Y26-

Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing.

5 - Kick Down Switch

- A programmed value for the Accelerator Pedal Position Sensor -G79-/Accelerator Pedal Position Sensor 2 -G185- (integrated in the accelerator pedal module) is saved in the engine control module as a kick-down signal.
- Signal transmitted from engine control module to transmission control module via the CAN bus.
- Accelerator Pedal Module. Refer to ⇒ Rep. Gr. 20; Accelerator Mechanism; Overview Accelerator Pedal Module.

6 - Diagnostic Connection

- ☐ For the Vehicle Diagnostic Tester
- ☐ In the driver footwell
- ☐ Check all of the listed components using the ⇒ Vehicle diagnostic tester in Guided Fault Finding.

2

⇒ L2.1 ocation Overview - Seals", page 138

⇒ S2.2 eal, Replacing", page 140

Seals

⇒ S2.3 eal, Replacing", page 141

Component Location Overview - Seals 2.1



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1 - Transmission

2 - Right Seal

□ Replacing. Refer to ⇒ S2.3 eal, Replacing", page 141

3 - Seal

- ☐ For the gearshift shaft
- □ Replacing. Refer to ⇒ S1.9 haft Seal, Replacing", page 53

4 - Right Seal

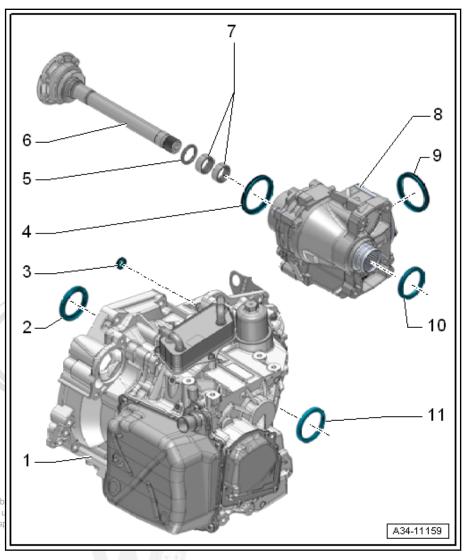
- For AWD vehicles
- □ Replacing. Refer to ⇒ S4.2.1 eal, Replacing", page 155

5 - Seal

- Replace after removing
- ☐ Insert into the surrounding right flange shaft groove
- ☐ Remove to replace the needle bearing (polygon bearing) -item 7-. Refer to ⇒ F4.2.4 lange **Shaft Needle Bearing** (Polygon Bearing), Replacing", page 169.

6 - Right Flange Shaft

- □ For AWD vehicles
- ☐ Removing and Instalected to permitted ling. Refer to ⇒ F3.3 lange Shaft, Reith res moving and Installing", page 148



7 - Needle Bearing (Polygon Bearing)

- ☐ If it is difficult to move when the flange shaft is removed, this is not an indication of a malfunction.
- □ Acoustic test only when installed
- ☐ Check for damage, for example for cracks on the bearing outer race
- □ Replacing. Refer to ⇒ F4.2.4 lange Shaft Needle Bearing (Polygon Bearing), Replacing", page 169.

8 - Bevel Box

9 - Seal

- For the output flange
- □ For AWD vehicles
- □ Replacing. Refer to ⇒ F4.2.3 lange Seal, Replacing", page 158.

10 - Seal

- ☐ Between the transmission and the bevel box, on the bevel box
- □ For AWD vehicles
- □ Replacing. Refer to ⇒ o4.2.2 n Bevel Box between Transmission and Bevel Box, Replacing", page <u>157</u> .

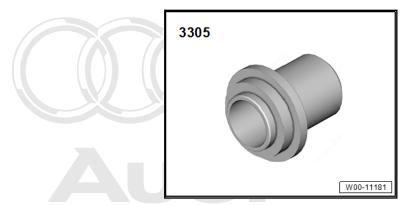
11 - Left Seal

- □ For the left flange shaft
- □ Replacing. Refer to ⇒ S2.2 eal, Replacing", page 140.

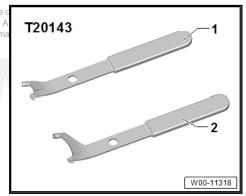
2.2 Left Seal, Replacing

Special tools and workshop equipment required

♦ Seal Installer - Flange Shaft -3305-



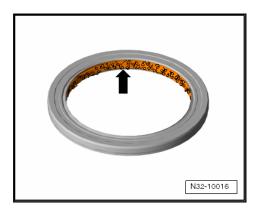
♦ Puller - Crankshaft/Power Steering Seale-120/143-right. Copying for private permitted unless authorised by AUDI AG. with respect to the correctness of inform



Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).

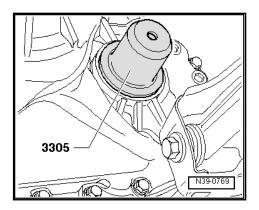
Procedure

- The transmission is installed.
- Remove the left flange shaft. Refer to ⇒ F3.2 lange Shaft, Removing and Installing", page 146.
- Remove the seal using the Puller Crankshaft/Power Steering Seal -T20143/1- or -T20143/2-.
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.

Drive the seal all the way in using the Seal Installer - Flange Shaft -3305-. Do not tilt the seal while doing so.



Install the left flange shaft. Refer to ⇒ F3.2 lange Shaft, Removing and Installing", page 146

2.3 Right Seal, Replacing

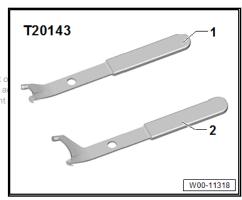
- ⇒ S2.3.1 eal, Replacing, FWD Vehicles", page 141
- ⇒ S2.3.2 eal, Replacing, AWD Vehicles", page 142

2.3.1 Right Seal, Replacing, FWD Vehicles

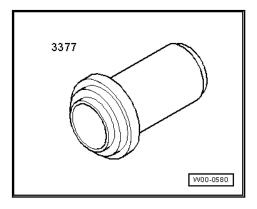
Special tools and workshop equipment required

◆ Puller - Crankshaft/Power Steering Seal -T20143-

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Seal Installer - Flange Shaft -3377-

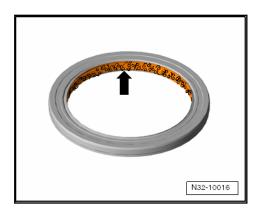


Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).

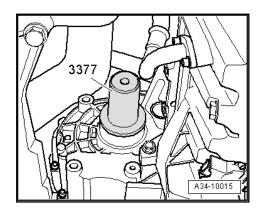
Procedure

- The transmission is installed.
- Remove the right flange shaft. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148

- Remove the seal using the Puller Crankshaft/Power Steering Seal -T20143/2-
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Install the new seal all the way in without tilting using the Seal Installer - Flange Shaft -3377-.



Install the right flange shaft. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148.

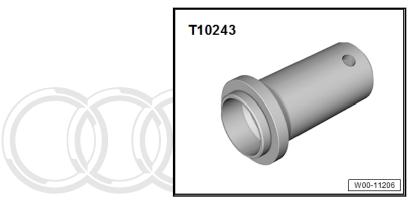
2.3.2 Right Seal, Replacing, AWD Vehicles

Special tools and workshop equipment required

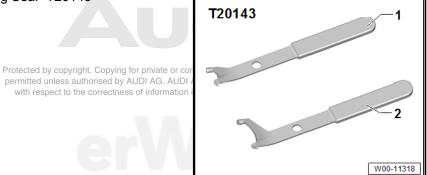
◆ Used Oil Collection and Extraction Unit -SMN372500-



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◆ Puller - Crankshaft/Power Steering Seal -T20143-

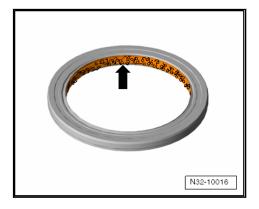


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 Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).

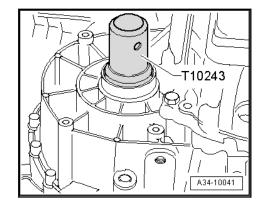
Procedure

- Remove the bevel box. Refer to <u>⇒ B6.2 ox, Removing</u>", page <u>96</u> .
- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.
- Pry out the seal on the transmission using the Puller -Crankshaft/Power Steering Seal -T20143/1- or -T20143/2-.
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the > Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Drive the new seal all the way in using the Seal Installer -Bevel Box -T10243-. Do not tilt the seal while doing so.





- Install the beyiel box Refer to ⇒ 86.3 ox Installing" page, is not 102 mitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the transmission fluid level. Refer to ⇒ F9.2 luid Lev-
- el, Checking", page 128.

3 Differential

- ⇒ -3.1 Differential", page 145
- ⇒ F3.2 lange Shaft, Removing and Installing", page 146
- ⇒ F3.3 lange Shaft, Removing and Installing", page 148

3.1 Overview - Differential

1 - Bolt

□ 30 Nm

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2 - Right Flange Shaft

☐ For FWD vehicles. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148.

3 - Bolt

□ 33 Nm

4 - Right Flange Shaft

- □ For AWD vehicles
- □ Removing and Installing. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148

5 - Seal

- Replace after removing
- Insert into the surrounding right flange shaft groove
- Remove to replace the needle bearing (polygon bearing) -item 6-

6 - Needle Bearing (Polygon Bearing)

- ☐ If it is difficult to move when the flange shaft is removed, this is not an indication of a malfunc-
- Acoustic test only when installed
- ☐ Check for damage, for example for cracks on the bearing outer race
- □ Replacing. Refer to ⇒ F4.2.4 lange Shaft Needle Bearing (Polygon Bearing), Replacing", page 169.

7 - Circlip

Replace after removing

8 - Bevel Box

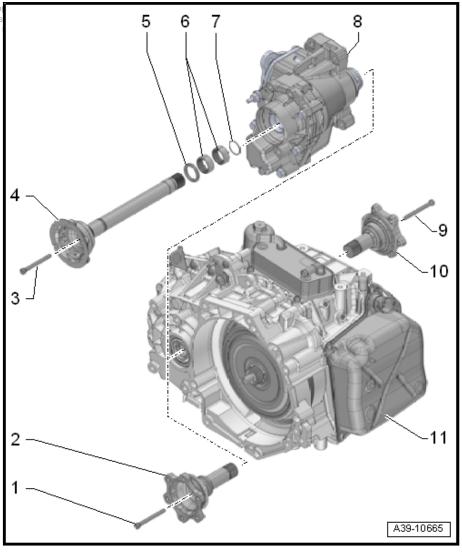
9 - Bolt

□ 30 Nm

10 - Left Flange Shaft

□ Removing and Installing. Refer to ⇒ F3.2 lange Shaft, Removing and Installing", page 146.

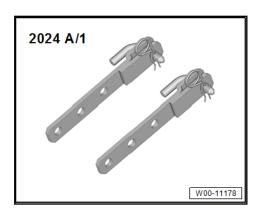
11 - Transmission



3.2 Left Flange Shaft, Removing and Installing

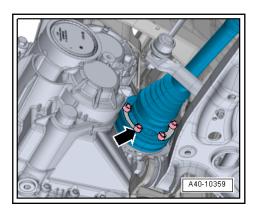
Special tools and workshop equipment required

◆ Engine Sling - Engine Bracket -2024A/1-

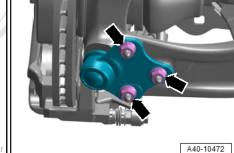


Removing

- The transmission is installed.
- Remove the left drive axle -arrow- from the transmission. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.

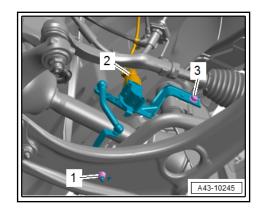


Using a felt-tip pen, mark the installation position of the left ball joint on the nuts -arrows-.

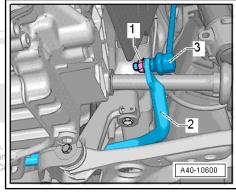


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- Remove the nuts.
- Remove the nut -1- and the bolt -3- and then move the Left Front Level Control System Sensor -G78- to the side.

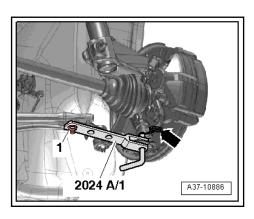


- Disengage the left ball joint from the transverse link.
- During the assembly work, make sure that the ball joint rubber boot does not get damaged. If necessary, protect the ball joint rubber boot from damage.
- Remove the nut -1- for the left coupling rod -3- on the stabilizer bar -2-.



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- Pivot the left drive axle forward.
- Make sure that the drive axle protective coating is not damaged.
- Pivot the left suspension strut outward and support it with the Engine Sling - Engine Bracket -2024 A /1- as shown.

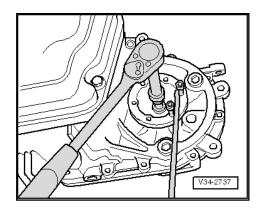




Risk of accident due to loose support parts.

- Secure the pin and ball joint with the securing pin -arrowand nut -1-.

Remove the left flange shaft bolt by installing two bolts in the flange and counterholding the flange shaft with an assembly



Remove the flange shaft with the pressure spring.

Installing

Install in the reverse order of removal while noting the following:

Press the flange shaft against the spring force and tighten.

Tightening Specifications

- Refer to \Rightarrow -3.1 Differential", page 145
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Lower Control Arm, Ball Joint; Overview - Lower Control Arm, Ball Joint.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Overview - Drive Axle.

3.3 Right Flange Shaft, Removing and Installing copyright. Copying for private or commercial purposes, in part or in whole, is not

⇒ F3.3.1 lange Shaff, Removing and Installing, Vehicles with FWD", page 148

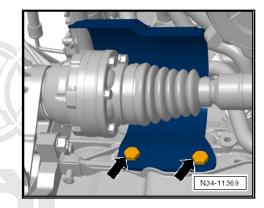
⇒ F3.3.2 lange Shaft, Removing and Installing, Vehicles with AWD", page 150

3.3.1 Right Flange Shaft, Removing and Installing, Vehicles with FWD

Removing

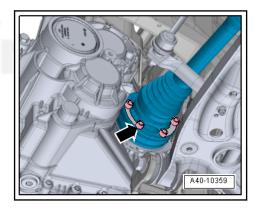
- The transmission is installed.
- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- If installed, remove the bolts -arrows-, and remove the right drive axle heat shield.



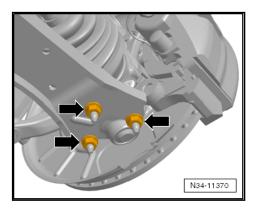


- Turn steering as far as possible toward right.
- Remove the right drive axle -arrow- from the transmission.

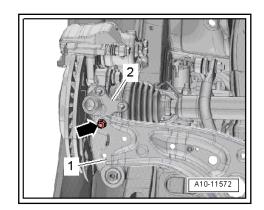
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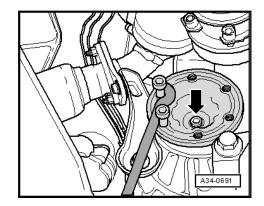
- Remove the nuts -arrows- on the right ball joint.



- If equipped, remove the nut from the bracket for the Right Front Level Control System Sensor -G289-.
- Disengage the right ball joint from the transverse link.
- Fasten the right ball joint -2- on the transverse link -1- with the nut -arrow-, as shown.



- Tie up the right drive axle toward the rear.
- Be careful not to damage the protective coating on the drive
- Install two bolts into the flange, counterhold the flange shaft with the pry lever and remove the bolt -arrow- from the right flange shaft.



Remove the flange shaft.

Installing

Install in the reverse order of removal while noting the following:

Press the flange shaft against the spring force and tighten? liability

Tightening Specifications

- Refer to ⇒ -3.1 Differential", page 145
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Lower Control Arm, Ball Joint; Overview - Lower Control Arm, Ball Joint.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Overview - Drive Axle.

3.3.2 Right Flange Shaft, Removing and Installing, Vehicles with AWD

Special tools and workshop equipment required

W00-11350

W00-11235

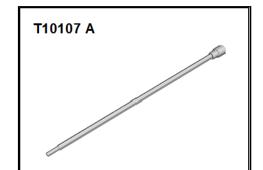
◆ Used Oil Collection and Extraction Unit -SMN372500-

Puller - Flanged Shaft -T10037-



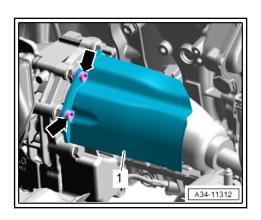
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◆ Socket and Extended Bit -T10107A-



Removing

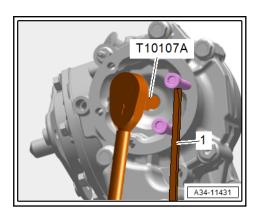
- The transmission is installed.
- Remove the nuts -arrows- and remove the right drive axle heat shield.



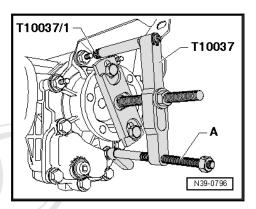


T10037

- Remove the right drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.
- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.



- Remove the right flange shaft bolt using the Socket and Extended Bit -T10107A- by installing two bolts in the flange and counterholding the flange shaft with an assembly lever.
- Fasten the Puller Flanged Shaft -T10037- to the right flange shaft as shown.



- Align the Puller Flanged Shaft with the Knurled Nut -T10037/1- and the spindle -A- so that it is parallel to the flange.
- Remove the flange shaft.

Installing

Install in the reverse order of removal while noting the following:

- Carefully install the flanger shalfs while rotating it at the same not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Tighten the flange shaft.
- Gear Oil, Checking Level. Refer to ⇒ 05.2 il, Checking Lev el", page 173

Tightening Specifications

- Refer to ⇒ -3.1 Differential", page 145
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Overview - Drive Axle.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.



Bevel Box Components 4

⇒ -4.1 Bevel Box Components", page 153

⇒ B4.2 ox Seals, Replacing", page 155

Overview - Bevel Box Components 4.1



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1 - Seal

- Between the bevel box and the transmission
- □ Replacing. Refer to ⇒ o4.2.2 n Bevel Box between Transmission and Bevel Box, Replacing", page 157

2 - Bevel Box

- □ Removing. Refer to ⇒ B6.2 ox, Removing", page 96.
- □ Installing. Refer to ⇒ B6.3 ox, Installing", page 102.

3 - Fluid Drain Plug

- With permanent seal
- □ Replace after removing
- □ Tightening Specification:
- Threads greased: 11 Nm
- Threads dry: 20 Nm

4 - Fluid Filler Plug

- With permanent seal
- Replace after removing
- □ Tightening Specification:
- Threads greased: 11 Nm
- Threads dry: 20 Nm

5 - Seal

- For the right flange shaft
- □ Replacing. Refer to ⇒ S4.2.1 eal, Replacing", page 155

6 - Bleed Pipe

- ☐ For bleeding the bevel box
- Press it in all the way

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7 - Cap

For bleeding the bevel box

8 - Right Flange Shaft

Removing and Installing. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148.

9 - Seal

- ☐ Insert into the surrounding right flange shaft groove
- Remove to replace the needle bearing (polygon bearing) -item 10-.

10 - Needle Bearing (Polygon Bearing)

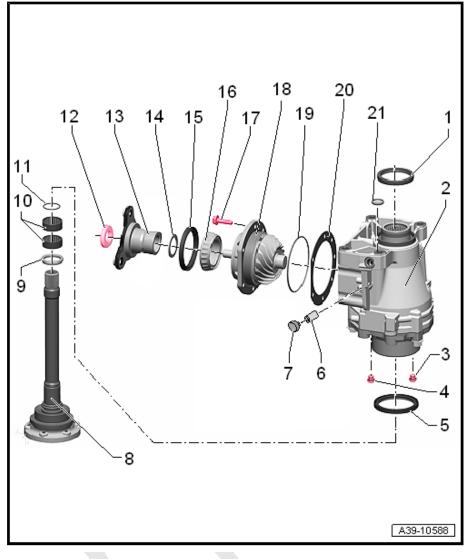
□ Replacing. Refer to ⇒ F4.2.4 lange Shaft Needle Bearing (Polygon Bearing), Replacing", page 169.

11 - Circlip

Replace after removing

12 - Twelve-Point Nut

Replace after removing



 Secure the new nut by peening. Refer to ⇒ page 168. 340 Nm ±15 °C
13 - Bevel Box Output Flange
14 - Shim
☐ No replacement part
15 - Seal
☐ For bevel box output flange
□ Replacing. Refer to ⇒ F4.2.3 lange Seal, Replacing", page 158.
16 - Tapered Bearing Inner Race
□ No replacement part
17 - Bolt
□ 38 Nm
18 - Pinion Housing
Protected v With Shaff bevel dear and outer race for tapered of oller bearing permitted unless authorised by AUDI AC. AUDI AG does not guarantee or accept any liability with repeacement part on in this document. Copyright by AUDI AG.
 Carefully pry out, alternating from side to side
Note the fastening holes; the pinion housing fits only in one position
19 - O-Ring
To replace, remove the bolts -item 17- and carefully pry out the pinion housing at the notches in the pinion housing.
☐ Do not remove the twelve-point nut -item 12- and the output flange -item 13
20 - Shim
☐ No replacement part
□ Note the bevel box fastening holes; the shim only fits in one position
21 - Cap
☐ No replacement part

4.2 Bevel Box Seals, Replacing

⇒ S4.2.1 eal, Replacing", page 155

⇒ o4.2.2 n Bevel Box between Transmission and Bevel Box, Replacing", page 157

⇒ F4.2.3 lange Seal, Replacing", page 158

⇒ F4.2.4 lange Shaft Needle Bearing (Polygon Bearing), Replacing", page 169

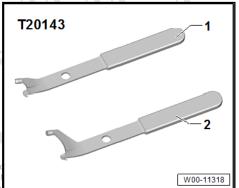
4.2.1 Right Seal, Replacing

Special tools and workshop equipment required

Seal Installer - Flange Shaft -T10049-



Puller - Crankshaft/Power Steering Seal -T20143-

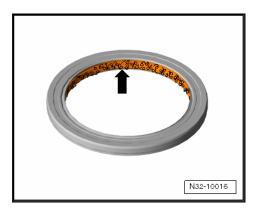


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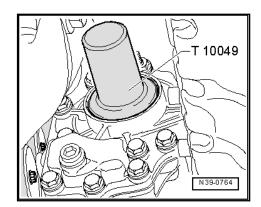
Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).

Procedure

- The transmission is installed.
- Remove the right flange shaft. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148.
- Remove the right seal using the Puller Crankshaft/Power Steering Seal -T20143/2-.
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Drive the new seal all the way in using the Seal Installer -Bevel Box -T10049-. Do not tilt it while doing so.

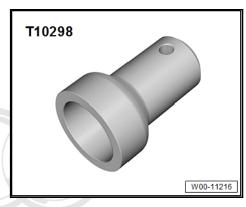


- Install the right flange shaft. Refer to ⇒ F3.3 lange Shaft, Removing and Installing", page 148
- Gear Oil, Checking Level. Refer to ⇒ O5.2 il, Checking Level", page 173

4.2.2 Seal on Bevel Box between Transmission and Bevel Box, Replacing

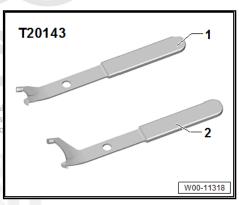
Special tools and workshop equipment required

♦ Seal Installer - Bevel Box -T10298-



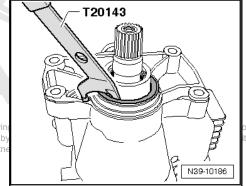
◆ Puller - Crankshaft/Power Steering Seal -T20143-





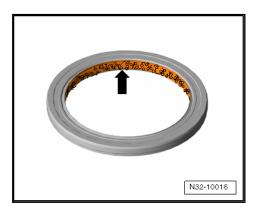
Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).

Procedure

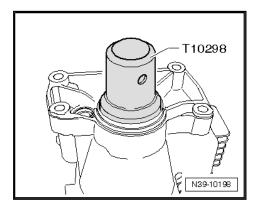


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- Remove the bevel box. Refer to ⇒ B6.2 ox, Removing", page
- Pry out the seal on the bevel box using the Puller Crankshaft/Power Steering Seal -T20143/1- or -T20143/2-.
- Coat the outer edge and sealing lips on the new seal with transmission fluid.



- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Drive the new seal all the way in using the Seal Installer -Bevel Box -T10298-. Do not tilt it while doing so.

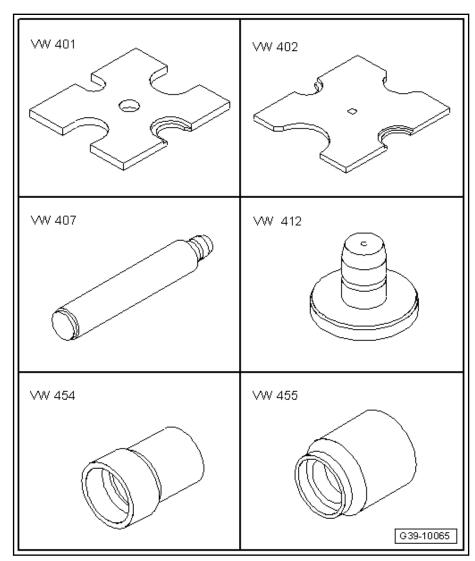


Install the bevel box. Refer to <u>⇒ B6.2 ox, Removing</u>", page <u>96</u> .

4.2.3 Output Flange Seal, Replacing



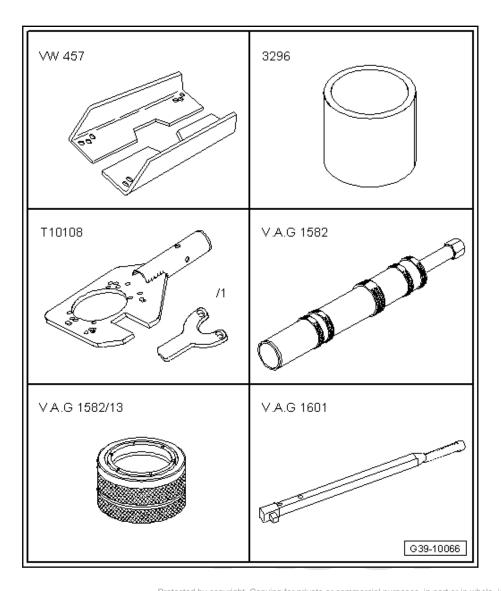
Special tools and workshop equipment required



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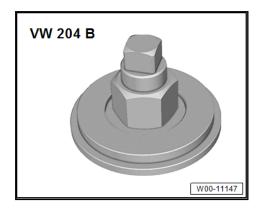
- ♦ Press Plate -VW 401-
- Press Plate -VW 402-
- Press Piece Rod -VW 407-
- Press Piece Multiple Use -VW 412-
- Press Piece Multiple Use -VW 454-
- ♦ Press Piece Multiple Use -VW 455-





- Support Channels -VW 457-
- Press Piece Reverse Gear Syncro -3296-
- Gearbox Support -T10108- with Gearbox Support Stop Plate -T10108/1-
- Puller Taper Roller Bearing -V.A.G 1582-
- Puller Taper Roller Bearing Adapter 13 -V.A.G 1582/13-
- Torque Wrench 1601 V.A.G 1601-
- Seal Installer Crankshaft -VW 204 B-





Dial Indicator Holder -VW 387-

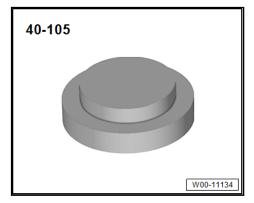


Press Piece - Multiple Use -40-105-

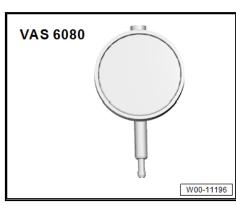
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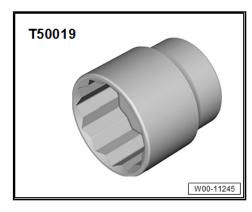




◆ Dial Indicator -VAS 6080A-



♦ Socket AF 34 mm -T50019-

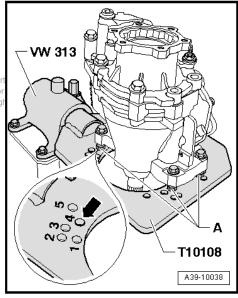


- Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ET-KA).
- ◆ M10 x 30 bolt (quantity: 2)
- M8 x 25 bolt (quantity: 1)
- ♦ M12 x 10 nut (quantity: 4)

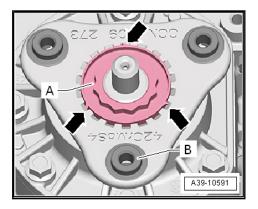
Procedure

- A tapered roller bearing inner race is pressed onto the bevel box output flange.
- This is removed later in the procedure.
- Do not replace the tapered roller bearing for the bevel box output flange and the shims.
- Remove the bevel box. Refer to ⇒ B6.2 ox, Removing", page
- Place the bevel box on the hole -arrow- marked with the number "4" in the Gearbox Support -T10108-. Place the M12 x 10 nut -item A- between the bevel box and the transmission holder to do so.

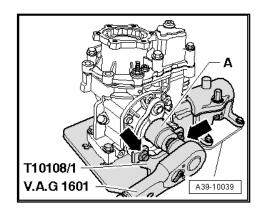
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- Align the bevel box with the remaining three holes and secure it with the nuts -A- inserted between.
- Drain the gear oil from the bevel box. Refer to \Rightarrow 05.3 il. Draining and Filling", page 175.
- Turn the points -arrows- on the twelve-point nut -A- back into the recesses on the output flange -B-.



Lock the bevel box output flange using the Gearbox Support - Stop Plate -T10108/1- by installing the two M10 x 30 bolts -arrows-.

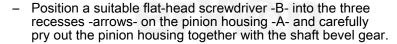


- A Socket AF 34 mm -T50019-
- Remove the output flange nut.
- Pivot the bevel box so that the output flange faces upward.

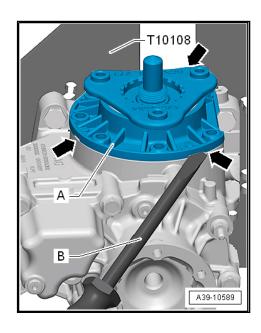


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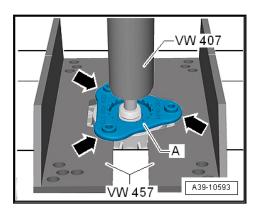




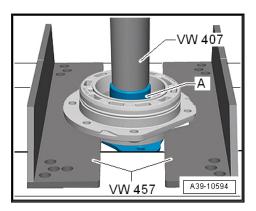




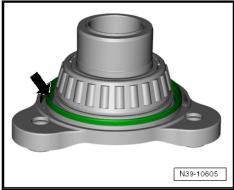
Place the output flange -A- evenly onto the Support Channels -VW 457- -arrows-.



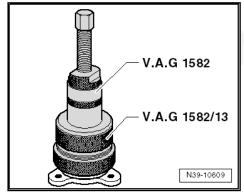
- Remove the shaft bevel gear from the output flange -A-.
- Secure the shaft bevel gear and tapered bearing inner race from falling.
- Remove the output flange -A- from the pinion housing.



The seal -arrow- is located on the output flange.



Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not The tapered bearing inner race must be removed by AUDI AG. AUDI AG. AUDI AG does not guarantee or accept any liability that the tapered bearing inner race must be removed to the contents of information in this document. Copyright by AUDI AG. output flange to remove the seal.

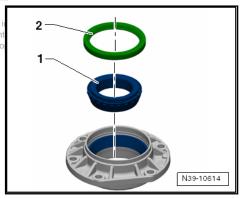




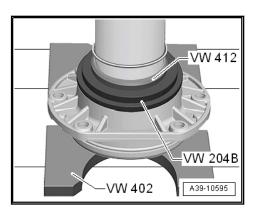
Risk of damaging the tapered bearing inner race.

- Remove the tapered bearing inner race using the Puller -Taper Roller Bearing - Adapter 13 -V.A.G 1582/13-.
- Replace the bevel box if the tapered bearing inner race is damaged.
- Place the Press Piece Multiple Use -40-105- on the output
- Remove the tapered bearing inner race from the output flange using the Tapered Roller Bearing Puller.
- Remove the output flange seal.
- Insert the old tapered bearing inner race -1- into the pinion housing.

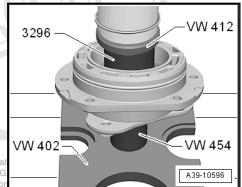
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- Lightly lubricate the outer diameter of the new output flange seal -2-.
- Install the seal so that it is flush.

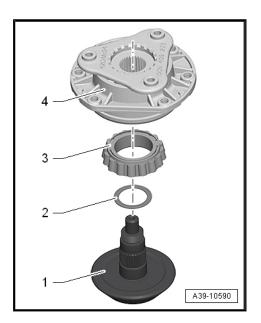


- The larger diameter of the Seal Installer Crankshaft -VW 204 B- points to the seal.
- Fill the space between the sealing/dust lip halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- Install the tapered bearing inner race (refer to <u>⇒ page 165</u>) all the way onto the output flange.

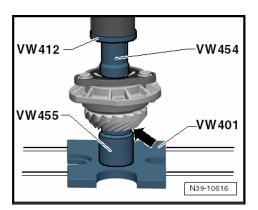


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- The larger diameter of the Press Piece Multiple Use -VW 454- points to the output flange.
- Install the tapered bearing inner race until it stops. Do not apply any greater pressure to the tapered roller bearing.
- Place the shim -2-, the tapered bearing inner race -3- and the pinion housing -4- onto the shaft bevel gear -1-.



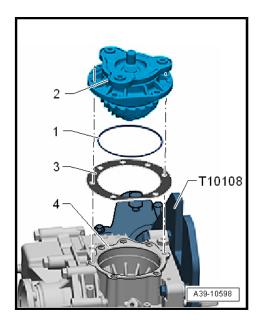
- Re-install the old shim -2-. This ensures the bearing pre-load of the shaft bevel gear in the pinion housing.
- Carefully press the pinion housing with the output flange all the way onto the shaft bevel gear.



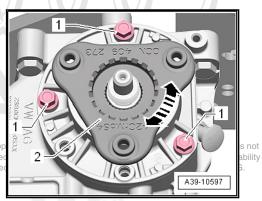
The shoulder -arrow- of the Press Piece - Multiple Use -VW 455- points to the shaft bevel gear.



- Turn the pinion housing during pressing procedure.
- Align the old shim -3- to the pinion housing -2-.

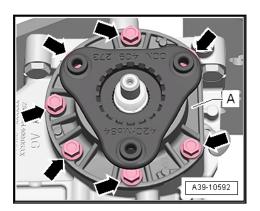


- The pinion housing -2- and shim -3- only fit in one position.
- Coat the new O-ring -1- with gear oil and slide it onto the pinion housing -2-.
- Insert the pinion housing -2- into the axle drive housing -4-.
- The splines on the shaft and head bevel gear must come in contact.
- Align the openings for the pinion housing bolts to the axle drive housing.
- Tighten the bolts -1- in small steps, alternating from side to side. While doing so, turn the output flange -2- back and forth slightly -arrows-.

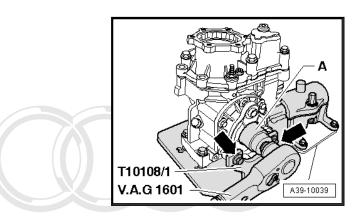


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Tighten the bolts -arrows- for the pinion housing -A- in a diagonal sequence.



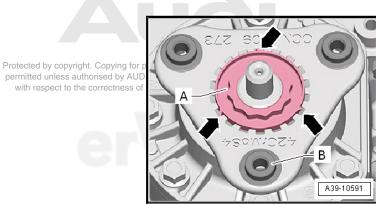
Tighten the new output flange twelve-point nut.



A - Socket AF 34 mm -T50019-

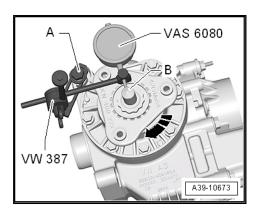
depressions -B- -arrows-.

- Secure the twelve-point nut -A-.



With the nut offset by 120°, move it into the output flange

Radial Run-Out on Output Flange/Shaft Bevel Gear, Measuring





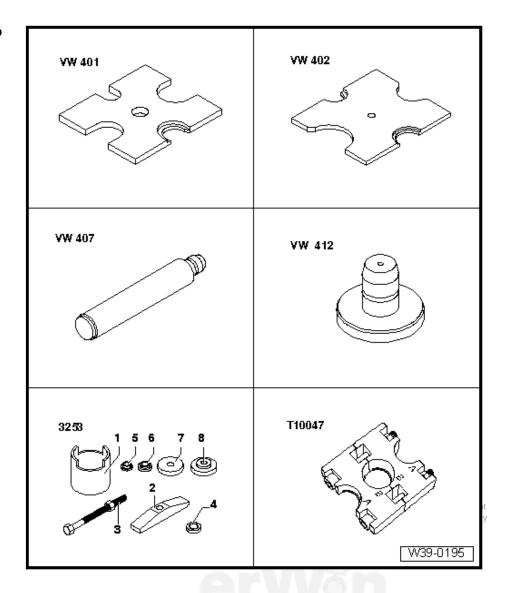
- Check the radial run-out on the shaft bevel gear alignment pin after tightening the output flange nut.
- Fasten the measuring tools to the bevel box using a M8 x 25 bolt -item a-.
- Position the Dial Indicator -VAS 6080A- on the shaft bevel gear alignment pin -B- and set it to "0" with 1 mm pre-tension.
- Turn the output flange one complete rotation -arrow-.
- Read the measured value on the dial gauge.
- Radial run-out: maximum 0.05 mm.
- Install the bevel box. Refer to <u>⇒ B6.3 ox, Installing</u>", page
- Gear Oil, Checking Level. Refer to ⇒ 05.2 il, Checking Level", page 173

Tightening Specifications

◆ Refer to ⇒ -4.1 Bevel Box Components", page 153

Right Flange Shaft Needle Bearing (Polygon Bearing), Replacing 4.2.4

Special tools and workshop equipment required

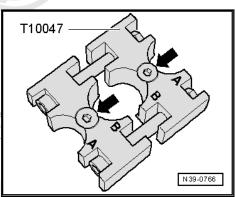


- Press Plate -VW 401-
- Press Plate -VW 402-
- Press Piece Rod -VW 407-
- Press Piece Multiple Use -VW 412-
- Bearing Installer Rear Wheel Bearing Kit -VAS 3253-
- Bearing Installer Needle Bearing -T10047-

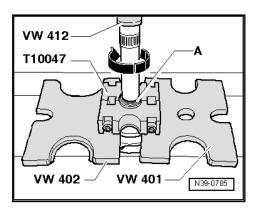
Procedure



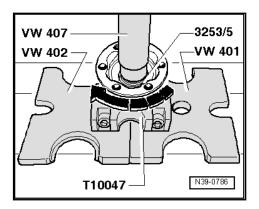
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- Remove the right flange shaft. Refer to ⇒ F3.2 lange Shaft, Removing and Installing", page 146.
- Mount the Bearing Installer Needle Bearing -T10047- as
- The markings "B" on both parts face each other
- The depressions -arrows- must be under the bearing.
- Bolt the parts together all the way.
- Remove the circlip -A-.



- The shaft must be rotated when pressing off -arrow- so that the needle bearing contact surface on the shaft does not get damaged.
- The shaft must be rotated when pressing on -arrow- so that the needle bearing contact surface on the shaft does not get damaged.



- Secure the needle bearing with a new circlip.
- Install the right flange shaft. Refer to \Rightarrow F3.2 lange Shaft, Removing and Installing", page 146



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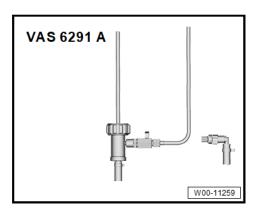
5 Gear Oil

- ⇒ f5.1 or Gear Oil Change", page 172
- ⇒ O5.2 il, Checking Level", page 173
- ⇒ O5.3 il, Draining and Filling", page 175

5.1 **Tools for Gear Oil Change**

Special tools and workshop equipment required

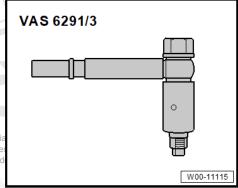
♦ Charging Device for AWD Clutch Coupling 2 -VAS 6291A-



If necessary: Oil Filler - Adapter 6 -VAS 6262/6- or Oil Filler - Adapter -VAS 6262/7- $\,$



Charging Device For AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3-



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Used Oil Collection and Extraction Unit -SMN372500-



- ◆ Protective Eyewear
- ♦ Acid-Resistant Safety Gloves

5.2 Gear Oil, Checking Level

Special tools and workshop equipment required

◆ Refer to ⇒ f5.1 or Gear Oil Change", page 172

Test Conditions

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- The selector level is in "P".
- The parking brake button is pressed to activate the electromechanical parking brake.
- · The engine is off.

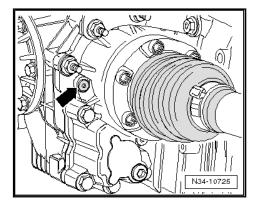
Gear Oil, Checking Level

- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.

CAUTION

Risk of injury to the eyes and hands by escaping oil.

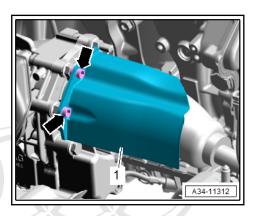
- Wear protective eyewear.
- Wear acid-resistant safety gloves.
- Cover the area under the oil filler hole with a cloth.



- Remove the oil filler hole plug -arrow-.

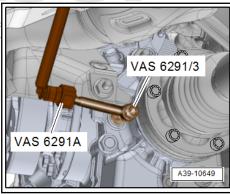
- Specified value: gear oil level up to lower edge of the oil filler hole.
- If the gear oil level is too low, add bevel box gear oil. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct gear

Gear Oil, Filling

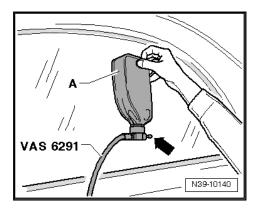


- All safety precautions and test conditions must be followed.
- Remove the nuts -arrows- and remove the right drive axle heat shield.
- Route the hose for the Charging Device for AWD Clutch Coupling 2 -VAS 6291 A- upward.





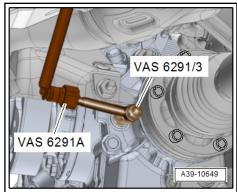
- Install the Charging Device for AWD Clutch Coupling 2 -Adapter 3 -VAS 6291/3- until it stops.
- Attach the charging device hose to the Charging Device for AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3-.
- Check if the valve -arrow- is closed.



Screw the oil container -A- on to the Charging Device for AWD Clutch Coupling 2 -VAS 6291A-.



- Open the valve -arrow- and hold up the oil container as shown.
- When gear oil flows out at the Charging Device for AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3-, the gear oil level is OK.



- Tip the oil container so that any excess oil can flow back into the container.
- When there is no more oil flowing back, disconnect the charging device by pushing the tab.
- Remove the Charging Device For AWD Clutch Coupling 2 -Adapter 3 -VAS 6291/3-.

Assembling

Assembly is performed in the reverse order, while noting the following:

Replace the oil filler hole plug.

Tightening Specifications

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- ◆ Refer to ⇒ -4.1 Bevel Box Components is page 153. A John AG does not guarantee or accept any liability nation in this document, Copyright by AUDI AG.
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

5.3 Gear Oil, Draining and Filling

The gear oil in the bevel box must only be drained for a repair. Changing the oil is not intended.

Special tools and workshop equipment required

Refer to ⇒ f5.1 or Gear Oil Change", page 172

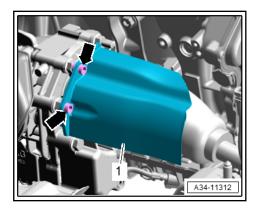
Conditions

- Move the vehicle onto a 4-column workshop hoist or over a work pit so that it stands horizontal.
- The selector level is in "P".
- The parking brake button is pressed to activate the electromechanical parking brake.
- The engine is off.

Gear Oil, Draining

Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.

Remove the nuts -arrows- and remove the right drive axle heat shield.



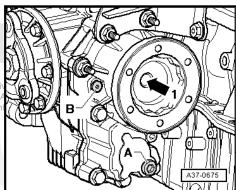
Place the Used Oil Collection and Extraction Unit -SMN372500- underneath.



CAUTION

Risk of injury to the eyes and hands by escaping oil.

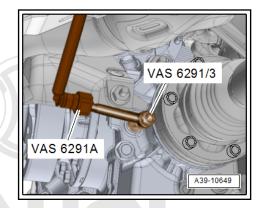
- Wear protective eyewear.
- Wear acid-resistant safety gloves.
- Remove the oil drain plug -A-.



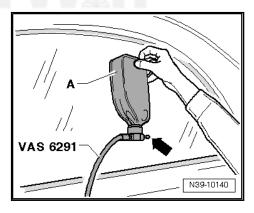
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- Let the gear oil drain.
- Tighten the oil drain plug -A-.
- Remove the plug -B- from the oil filler hole.
- If the gear oil level is too low, add bevel box gear oil. Refer to the \Rightarrow Electronic Parts Catalog (ETKA) for the correct gear oil.

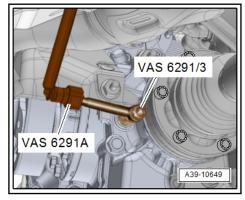
Gear Oil, Filling



- All safety precautions and test conditions must be followed.
- Route the hose for the Charging Device for AWD Clutch Coupling 2 -VAS 6291 A- upward.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Install the Charging Device for AWD Clutch Counting 2s authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Adaptor 3, VAS 6201/3, until it stone. Adapter 3 -VAS 6291/3- until it stops.
- Attach the charging device hose to the Charging Device for AWD Clutch Coupling 2 Adapter 3 -VAS 6291/3-.
- Check if the valve -arrow- is closed.



- Screw the oil container -A- on to the Charging Device for AWD Clutch Coupling 2 -VAS 6291A-.
- Open the valve -arrow- and hold up the oil container as shown.
- When gear oil flows out at the Charging Device for AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3-, the gear oil level is OK.



Tip the oil container so that any excess oil can flow back into the container.

- When there is no more oil flowing back, disconnect the charging device by pushing the tab.
- Remove the Charging Device For AWD Clutch Coupling 2 -Adapter 3 -VAS 6291/3-.
- Specified value: gear oil level up to lower edge of the oil filler hole.

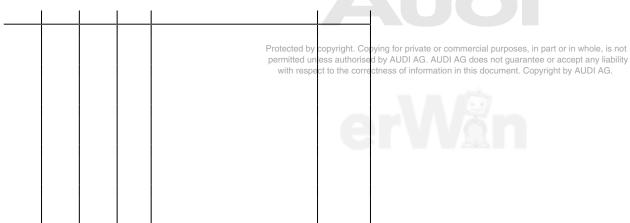
Assembling

Assembly is performed in the reverse order, while noting the following:

Replace the oil filler hole plug.

Tightening Specifications

- Refer to ⇒ -4.1 Bevel Box Components", page 153
- Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.



Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described
 in this manual, we suggest you leave such repairs to an authorized Audi retailer or other
 qualified shop. We especially urge you to consult an authorized Audi retailer before beginning
 repairs on any vehicle that may still be covered wholly or in part by any of the extensive
 warranties issued by Audi.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system
 or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an
 approved fire extinguisher handy.
- Audi is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Audi retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be
 necessary to reestablish Transmission Control Module (TCM) basic settings using the Audi
 Factory Approved Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the
 purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may
 crumble under continuous load. Never work under a vehicle that is supported solely by a jack.
 Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of
 injury to yourself and others if you are tired, upset or have taken medicine or any other
 substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.

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- Always observe good workshop practices. Wear goggles when you operate machine fools of copyright by AUDI AG. work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace
 when you work near machine tools or running engines. If your hair, clothing, or jewelry were to
 get caught in the machinery, severe injury could result.

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Cautions & Warnings

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are
 designed to be used only once and are unreliable and may fail if used a second time. This
 includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the
 recommendations in this manual replace these fasteners with new parts where indicated,
 and any other time it is deemed necessary by inspection.
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not
 create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing
 asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as
 asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand.
 Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to
 the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts
 and procedures will not make good repairs or commercial purposes, in part or in whole, is not
 permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these
 tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten
 fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping
 hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame.
 Excessive heat will increase system pressure and may cause the system to burst.

Cautions & Warnings

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.
- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not
 exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute
 before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only
 be tested by trained Audi Service technicians using the Audi Factory Approved Scan Tool (ST)
 or an approved equivalent. The airbag unit must never be electrically tested while it is not
 installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire
 that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other
 sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times
 before breaking the bead from the rim. Completely remove the tire from the rim before
 attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.

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